# Fire Department Assessment

**of the**

***Fire & Rescue Department***

**for the**

## *City of Hastings, MI*

**Submitted By:**

McGrath Consulting Group, Inc.

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# Executive Summary

The intent of the Executive Summary is to provide an overview of the critical issues and opportunities identified by the Consultants during the study. The reader is highly encouraged to read the document in its entirety to gain an understanding of the recommendations presented within the report. Reading only the Executive Summary does not provide ample information on which to base decisions or to judge the recommendations made within this report. It is important to understand that this type of study is a snapshot in time, and findings were based on assessments of the Hastings Fire Department (HFD) during site visits as well as the materials and data provided by stakeholders.

McGrath Consulting Group, Inc. was commissioned by the City of Hastings, Michigan to conduct a Fire Department Assessment. The emphasis by the City officials was to provide a non-biased assessment of the current services and to address future needs. Therefore, this study is an objective, comprehensive assessment of the HFD and includes a review of the department's operations, fire station/location and condition, apparatus and equipment, training, policies, procedures, use of technology, emergency responses and activities, personnel management policies, mutual aid, fire prevention and inspections.

## Intergovernmental Agreement

The City of Hastings has had a long-time relationship with the Townships of Baltimore, Irving, Rutland, Carleton, and Hastings. These townships formed an association known as BIRCH and together with the City provide the resources needed by the Fire Department. Consideration of the creation of a more formal agreement in the future between the City and Townships would be advantageous.

## National Standards

The Consultants have identified the standards that are most appropriate for the HFD, listing them as mandatory or non-mandatory. Although the majority of the standards are non-mandatory, they act as a double-edge sword inasmuch as in a significant event, the Department would be judged against these standards. Therefore, the Consultants encourage the City and Fire Department officials to be aware of the standards but not to adopt any of the non-mandatory standards.

## Data Analysis

One of the most concerning issues with the HFD was their inability to provide accurate data as to their operations. It is obvious that if the Department recorded the data, it was not utilized in the daily management operations. Simply stated "You can't manage what you can't measure."

## Personnel Management

This section is most comprehensive as the firefighters receive compensation from two sources (City & BIRCH, although from a single check issued by the City) the firefighters are City employees and fall under the Fair Labor Standard Act (FLSA). Again, the Consultants emphasize the importance of accurate data records.

There is a significant concern within the membership as to who receives firefighter stipends as it doesn't appear to be tied to actual responding to emergency incidents. It appeared that the City provided a stipend to all firefighters without documentation that they were actually active in the mitigation of emergencies. This issue is addressed within the Personnel Management section of the report.

## Facility

The current Fire Department facility is inadequate and needs to be replaced. There appeared to be some disagreement about whether the current facility could be renovated or should be destroyed and rebuilt. In addition, the issue of where the fire station should be located was in disagreement. The Consultants identified factors to consider when replacing a fire station that when studied should help clarify a potential approach to a future Fire Department facility.

## Apparatus

The second most concerning issue was the condition of the Fire Department apparatus. The majority of the apparatus was old and would not meet the current safety standards applied to apparatus. It appears that for many years nothing was done to replace the current inventory of apparatus, leading to the Consultants finding that not a single piece of apparatus could pass the mandatory pump testing. In addition, there were little to no records of maintenance and repairs to the apparatus, all of which are essential in the event of an accident. The Consultants recognize that the City and BIRCH are not in a position to replace the majority of the Fire Department inventory currently, but they have been provided with a future replacement schedule. The Consultants have recommended the reduction of inventory of apparatus in the Fire Department.

## Training

The lack of documentation is most concerning because if the Fire Department does conduct training, there are limited records to document the type of training, lesson plan, competency testing, and who actually attended the training. The Consultants identified the Insurance Service Offices, Inc. (ISO) mandatory training category hours for maximum ISO credit. The department would benefit from a Training Record Quality Assurance Program.

## Future Vision of the Hastings Fire Department

This section summarizes the recommendations that apply to the Hasting Fire Department.

# Introduction

McGrath Consulting Group was commissioned by the City of Hastings to perform an analysis/assessment of the Hastings Fire Department (HFD). For this study, the Consulting team conducted a series of interviews with elected and appointed City Officials, Township stakeholders, Fire Department Leadership Team as well as rank-and-file members of the Department as outlined below:

- Hastings Mayor
- Hasting City Council Member
- Hastings City Manager
- BIRCH Association Chair
- Township Supervisors (2)
- Hastings Fire Chief
- Hastings Fire Department Officers
- Hastings Fire Department Members
- Mercy Ambulance Management

In addition to the site surveys conducted, historical/past records and documentation pertaining to the HFD operational services were reviewed. However, it is important for the reader to understand that a study of this nature is a ***snapshot in time***, and the number of employees, apparatus, policies, and other items can be fluid. Consultants have the advantage of standing on the balcony and looking down on a department's overall operation from a global perspective without initially knowing the history of past events or concerns. Through the analysis of the organization, it was found that the Department consists of a small workforce of highly dedicated individuals committed to providing service to their community.

Any report of this nature is only as good as the data and information provided to the Consulting team. For a study of this nature, a significant amount of documentation was needed. Every effort was made to obtain accurate data and examine the issues from a non-prejudicial perspective. Although the Department was unable to provide all the data requested, it should be noted that it was not due to a lack of effort on the part of leadership. The Department lost a long-standing member (Fire Chief) who passed away after 49 years of service; in addition, the record management system was changed in 2020 which resulted in the loss of much of the prior data.

Therefore, the recommendations made within this report are based on quantitative and qualitative data such as data provided by the Fire Department officials, employees, interviews of Board members, observations, standards, research, and sources that are associated with the topic, and the experience of the Consultants – who have spent years in either Fire/EMS Emergency Services or an aspect related to that endeavor.

Appendix A lists the data that was requested by the Consulting Team prior to the first site visit. Thus, the analysis and recommendations are based upon the requested data provided by the HFD.

## Project Team

Four Consultants were assigned to this project; each handled topics that were appropriate to their specific skills and expertise. It is important to draw to the attention of the reader that the intent of the Consulting Team was to write a report that identified areas of excellence as well as areas that have opportunities for improvement.

Our team of Consultants includes professionals who have held leadership positions as administrator, council members, public safety director, fire chief (municipal and district), police chief, EMS directors, legal advisor, university professor, and human resource specialists. The following members will be a part of the recruitment team:

**Dr. Victoria McGrath –** CEO of McGrath Human Resource Group, a subsidiary of McGrath Consulting Group, Inc. has over 25 years of experience in the field of human resources in the public and private sector and ten years of recruitment experience in our consulting firm. She has extensive experience in working on projects with both the Police and Fire Departments which include assessing leadership attributes.

Dr. Victoria McGrath received her Doctoral degree from the University of Wisconsin-Milwaukee, focusing on government and its efforts in efficiency. She holds a Master's degree in Management and a dual Bachelor's degree in Business and Labor Relations. She is an adjunct faculty member for Northwestern University and the University of Wisconsin-Milwaukee, in both the Master's and Doctorate programs, teaching courses in management, labor issues, recruitment and retention, public sector organizational behavior, and research and writing.

**Dr. Tim McGrath,** CEO of McGrath Consulting Group, Inc. has retired as Fire Chief from two very diverse communities in Illinois and Wisconsin with 33 years of active Fire/EMS service. As an executive board member of the Illinois Fire Chiefs, he was active in the Association's Service Bureau's activities. These included the recruitment, testing, and placement of Fire Department Chief Officers. His practical experience and formal education in management initiatives brings a unique dimension to the consulting team.

Dr. McGrath has a Doctorate degree in Management and a dual Master's degree in Public Administration and Management. He also holds a Bachelor of Science in Education, and an Associate Degree in Fire Science Management. Chief McGrath has been an adjunct faculty member at the Bachelor level for Southern Illinois University; Master's level for Webster University; and hired by Northwestern University to teach in the United Arab Emirates.

**Chief Mike Stried**, Lead consultant for your project, is a senior consultant with our firm. Chief Stried has over 35 years in the Fire Service and held a Chief Officer's position in both a volunteer and career Fire/EMS Department. Chief Stried is an adjunct faculty member at the National Fire Academy and has been a consultant with McGrath Consulting Group, Inc. for 13 years. Chief Stried will be responsible for overseeing/coordinating/conducting all aspects of your project.

**Chief Rocco Campanella**, Chief Campanella has over 29 years of Fire/EMS service. Chief Campanella is currently an active part-time Fire Chief who brings management of employees of all types whether it be volunteer, paid-on-call, paid-on-premise, or full-time. His part-time municipality covers the largest freshwater marina on the Great Lakes. Experience at the part-time level includes assisting with a Federal FLSA lawsuit against the municipality, ensuring the department is OSHA compliant, and an overhaul of the fleet maintenance division. Chief Campanella was awarded multiple grants including a $215,000 FEMA Assistance to Firefighter Grant for new portable and mobile radios. The Department is an all-hazards organization whether it be dive rescue, technical rescue, or hazardous materials. Chief Campanella is often referred to as having to rebuild the Department from the ground up, developing a training division, Fire Prevention Bureau, and fleet maintenance.

## Recommendation Priority Hierarchy

All recommendations made throughout the report will be distributed when appropriate and will end with a "Priority Rank" using the table below:

***Table 1: Recommendation Priority Hierarchy***

| Report Priority Hierarchy | | |
|---|---|---|
| **Priority** | **Definition** | **Example** |
| 1 | Urgent /Immediate | Recommendations that require immediate or action/inaction by the governing body. Examples include but are not limited to compliance with regulations, laws, life safety, physiological or environmental needs. |
| 2 | Pressing | Significant impact on the organization; action needed as soon as possible. |
| 3 | Important | The organization will benefit by addressing soon, items that should be accomplished. |
| 4 | Future Consideration | Items that need to be addressed; develop future plan of action, low consequence of delay in action. |
| 5 | Information Only | The organization should be aware; take it under consideration. |

# Fire Department Overview

The Department was formed by City Council action in 1876 originally called Pioneer Engine Company #1 to provide fire protection to the City of Hastings with a Hand-Pump Cart utilized to fight fires. In 1919 the City purchased the first motorized fire truck, an American LaFrance pumper with right hand drive and hard rubber tires. In approximately 1926 area residents in the surrounding rural areas being concerned with their lack of fire protection, formed what was referred to as the Hastings Rural Fire Association to provide assurance for some form of fire protection to their areas. Over time, the BIRCH Association, consisting of the five surrounding townships, was formed to work with the City of Hastings to provide fire and EMS protection which exists to this day.

The area served by the HFD covers the City of Hastings, which is approximately 5.2 square miles and approximately 135 square miles of the Townships of Rutland, Hastings, and Baltimore in their entirety, 56% of Carlton Township, and 25% of Irving Township. The Townships have formed an organization/association known as the BIRCH Rural Fire Association (BIRCH). The term BIRCH was derived from:

***Table 2: BIRCH Association***

| ***BIRCH Rural Fire Association*** | |
|---|---|
| **B** | Baltimore Township |
| **I** | Irving Township |
| **R** | Rutland Township |
| **C** | Carleton Township |
| **H** | Hastings Township |

The population served is approximately 26,517 residents, which consists of 7,539 residents in the City of Hastings and 18,978 residents in the Townships.

The Fire Department currently provides Paid-on-Call (POC) Fire and Rescue Services to the City of Hastings and the five surrounding townships. The HFD is currently staffed through the paid-on-call methodology with a membership of 14 at the time of the study. The group is comprised of the (Part-Time) Interim Fire Chief, one paid driver (Weekdays 8A.M-4:00 P.M.) and 12 P.O.C. members, which include one Captain, two Lieutenants, and 10 Firefighters. The Paid-on-Call (POC) members are notified of any calls through the Barry County Central Dispatch 911 Center via pagers provided by the Department. All members carry their personal protective turnout gear in their personal vehicles and respond directly to the scene of an emergency unless they must pass by the Fire Station on the way, in which case they would respond to the station and go to the scene on the fire apparatus.

Fire Department members are reimbursed in multiple ways:

***The City*** *pays each member a yearly stipend, which is divided into four quarterly checks. All members get the same City stipend dollar amount regardless of if they respond to any emergencies or not e.g., member X receives full City stipend for responding to 3 emergency calls per year; whereas member Y receives full City stipend if they responded to 200 emergency calls per year. This was a point of contention with the members during employee interviews.*

***The district*** *pays responding members an hourly rate ($15.29) for calls occurring within the BIRCH area. Members who respond to the fire station but do not respond to the scene of the incident are paid $5.00 per call. Paid-on-call Firefighters generally respond to the fire station to handle any calls which arise but do carry their emergency protective fire gear in their personal vehicles and may respond directly to an incident if the call is within a proximity to their location.*

***Training*** *all members are paid $20.00 per training session.*

All members (non-Probationary) are certified to the Firefighter II level and most members are certified as a Medical First Responder (MFR). Mercy Private Ambulance Service is housed separately in the City and provides ALS-EMS to the City of Hastings and the surrounding BIRCH Townships. The Fire Department does respond to certain ambulance calls in a backup/manpower capacity to both the City as well as the Townships.

In addition to the normal/routine firefighting and first responder (MFR) duties carried out by the HFD, additional services are provided by the Fire Department which include:

- Swift Water Rescue
- Surface Ice Rescue
- Auto/Vehicle Extrication
- Hazardous Materials First Response
- Technical Rescue First Response
- Public Safety Education

In the event of the need for additional help for technical rescues such as High Angle, Trench, Structural Collapse, or Agricultural Incidents, the Barry County Emergency Management Agency/Director would be notified, and the Michigan 5th District Rescue Task Force would be requested for additional assistance out of Kalamazoo. In the event of any Hazardous Materials Incidents within the area, the 51st Civil Air Division of the Michigan National Guard out of Battle Creek would be requested through the Barry County EMA to respond.

## Governance

The City of Hastings is governed by the Mayor/City Council form of government and is represented by eight City Council members and a Mayor. There are four aldermanic districts within the City with two aldermen elected per district. Each of the council members, although elected from their respective

aldermanic district, represents the City, not their respective district alone. Each member is elected to a four-year term. The day-to-day management of the City is overseen by the City Manager.

There are five Townships surrounding the City of Hastings including Baltimore Township, Irving Township, Rutland Township, Carlton Township and Hastings Township. These five Townships have over the years worked together to form a coalition now known as the BIRCH Association to provide fire and ambulance services within their Townships. Such services are provided by the HFD and the Association through a contract with the City of Hastings pays an annual fee.

The actual governance of the HFD is through the Hastings City Council, with daily oversight of the Fire Department by the City Manager. The Fire Chief is appointed by the City Manager with the consent of the City Council. The Chief directs the Fire Department with the help of an Assistant Fire Chief and the Fire Department officers all of whom are selected/appointed by the Chief.

# National/Industry Standards

There are numerous national standards and codes the HFD must be aware of; when a serious incident occurs (such as a serious injury or death of a Firefighter), departments are typically judged by these standards. Therefore, it is prudent to discuss national standards that impact the City, Township, and the Fire Department's Fire and EMS Services. Consideration as to the implications of these standards to the Fire Department can only be determined by those that govern, inasmuch as most of the standards are not mandatory.

This report contains pertinent information from the National Fire Protection Association (NFPA), Insurance Service Office (ISO), Occupational Safety and Health Administration (OSHA) and Center of Public safety Excellence (CPSE), as well as codes and standards which apply to the HFD.

## National Fire Protection Association (NFPA)

### *Non-mandatory*

The mission of the National Fire Protection Association (NFPA), established in 1896 by a group of insurance firm representatives, was to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. The world's leading advocate of fire prevention and an authoritative source on public safety, NFPA develops, publishes, and disseminates more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks. These codes and standards are developed by technical committees staffed by over 6,000 volunteers and are adopted and enforced throughout the world. Therefore, applicable NFPA standards and codes will be listed within this Study.

The National Fire Protection Association (NFPA) uses consensus standard rule making:

> *Consensus standards are standards developed through the cooperation of all parties who have an interest in participating in the development and/or use of the standards. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution.*

The NFPA has many standards that affect fire departments. These standards should be assessed and considered by fire departments to protect fire and rescue personnel from unnecessary workplace hazards. The NFPA standards establish the standard of care that may be used to evaluate fire department performance in civil lawsuits against fire and rescue departments. In most cases, compliance with NFPA standards is voluntary.

However, in some cases, federal or state OSHA agencies have incorporated wording from NFPA standards into regulations. In these cases, compliance with the standards is mandatory. Regardless of whether compliance with an NFPA standard is voluntary or mandatory, fire and rescue departments must consider the impact of "voluntary" standards on private litigation. In some states, a department may be liable for the negligent performance of its duties. Even in states that protect emergency provider personnel under

an immunity statute, most state laws do not protect fire or rescue departments for grossly negligent or willful and wanton acts. Essentially, negligence involves the violation of a standard of care that results in injury or loss to some other individual or organization.

NFPA consensus standards establish widely accepted standards of care and requirements for certain practices. *Standards* are an attempt by an industry or profession to self-regulate by establishing minimal operating, performance, and/or safety standards, which establish a recognized "standard of care."

Committees composed of industry representatives, fire service representatives, and other affected parties, who seek consensus in their final rule, write these standards. The outcome is a "minimum" that everyone can agree on, rather than an "optimum" that is the best case.

## Why Standards Are Needed

Fire growth and its behavior are now scientifically measurable, as are the expected outcomes associated with untreated cardiac arrest, and the specific resource requirements to control fires and to prevent deaths. Despite studies with overwhelming facts, many communities approach Fire & Rescue organization and deployment based solely on budgetary needs and not the potential for life savings.

### *NFPA 1710 or NFPA 1720*

NFPA adopted two standards addressing fire department organization and development: NFPA 1710 (Organization and Development of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments), and a sister standard NFPA 1720 (Organization and Development of Fire Suppression, Emergency Medical Operations, and Special Operations to the Public by Volunteer/Paid-On-Call Fire Departments).

If a department's employees are both career and paid-on-call, they are classified as a "combination Fire Department". NFPA's definition is **Combination Fire Department –** a Fire Department having emergency service personnel comprising of less than 85% majority of either volunteer or career membership. While the HFD has no career personnel, they would be classified under the NFPA 1720 standard.

Why does it matter which NFPA code would apply? Although NFPA 1720 is very comprehensive, it is not as stringent as NFPA 1710. The Consultants recommend that the department **does not adopt** either code; rather they should attempt to meet as many of the NFPA standards as feasibly and fiscally possible. It is assumed the Authority Having Jurisdiction (AHJ) would choose NFPA 1720 inasmuch as it is less stringent and allows for greater flexibility in resources needed. The Consultants recommend that when referring to NFPA standards, the Department leadership utilizes NFPA 1720. What the Department cannot due is switch between the two standards to choose which is best at any given moment.

## *Suppression Staffing and Response NFPA 1720 Standard*

The table below is also discussed in the *ISO 4.3 Staffing and Deployment* section of this report. Under NFPA 1720, the number of responding firefighters and the amount of time in which they are required to respond varies with the number of people (population) per square mile to an eight (8) mile radius as illustrated in the table below:

***Table 3: NFPA 1720: 4.3.2 Staffing and Response Time***

| *Demand Zone (a)* | *Demographics* | *Minimum Staff to Respond (b)* | *Response Time (Minutes) (c)* | *Meet Objective (%)* |
|---|---|---|---|---|
| *Urban* | *>1,000/mi²* | *15* | *9* | *90* |
| *Suburban* | *500-1,000/mi²* | *10* | *10* | *80* |
| *Rural* | *<500/mi²* | *6* | *14* | *80* |
| *Remote* | *≥ 8 miles* | *4* | *Related to Travel Distance* | *90* |
| *Special Risk* | *AHJ** | *AHJ** | *AHJ** | *90* |

** Determined by Authority Having Jurisdiction (AHJ)*

*a) A jurisdiction can have more than one demand zone*

*b) Minimum staffing includes members responding from the AHJ's department and automatic aid*

*c) Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.*

For example, if the fixed population is 500 to 1,000 people within one (1) square mile, the Department must respond with a minimum of ten (10) firefighters within ten (10) minutes 80% of the time. This is considerably less stringent than the NFPA 1710 requirement for the same criteria of 14 firefighters (one additional if the aerial is utilized) within a five (5) minute response from the time of notification by dispatch 90% of the time.

### NFPA 1720 Special Interest

*The NFPA 1720 standard is very comprehensive and those who govern and lead the Fire Department should be familiar with the components of this document; it is less stringent than NFPA 1710. What should be of special interest to the department is Chapter 4 of NFPA 1720 edition 2020:*

Chapter 4 Organization, Operation, and Deployment
4.1 Fire Suppression Organization
4.2 Community Risk Management
4.3 Staffing and Deployment
4.4 Reporting Requirements
4.5 Fire Suppression Operations
4.6 Initial Fire-Fighting Operations
4.7 Sustained Fire-Fighting Operations
4.8 Intercommunity Organization
4.9 Emergency Medical Services (EMS)

4.10 Special Operations

## 4.3 Staffing and Deployment

*4.3.1. The Fire Department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.*

*4.3.2* The table (shown above paragraph) shall be used by the AHJ to determine staffing and response time objectives for structural firefighting, based on a low-hazard occupancy such as a 2,000 ft² two-story, single family home without basement and exposures and the percentage accomplishment of those objectives for reporting purposes as required in 4.4.2.*

*4.4 Annual Evaluation*

*4.4.2.1. The Fire Department shall evaluate its level of service, deployment delivery, and response time objectives on an annual basis.*

*4.4.2.2. The evaluation shall be based on data relating to level of service deployment, and the achievement of each response time objective in each demand zone within the jurisdiction of the Fire Department.*

***Quadrennial Report***

*4.4.3 Quadrennial Report. The Fire Department shall provide the Authority Having Jurisdiction (AHJ) with a written report, quadrennially, which shall be based on the annual evaluation required by 4.4.2.*

*4.4.3.2 This report shall explain the predictable consequences of identified deficiencies and address the steps within the Fire Department's strategic plan necessary to achieve compliance.*

## 4.5 Fire Suppression Operations

NFPA 1720 is much less stringent than NFPA 1710 (career departments), which specifies how many individuals must be on the emergency scene to begin an interior fire attack. However, the following standards do apply to combination, volunteer, and paid-on-call departments:

*4.5.1 Incident commander. One individual shall be assigned as the incident commander.*

*4.5.1.2 The incident commander shall be responsible for the overall coordination and direction of all activities for the duration of the incident.*

*4.6.1 Initial firefighting operations shall be organized to ensure that at least four members are assembled before interior fire suppression operations are initiated in a hazardous area.*

*4.6.3 Outside the hazardous area, a minimum of two members shall be present for assistance or rescue of the team operating in the hazardous area.*

*4.6.4 Initial attack operations shall be organized to ensure that if, upon arrival at the emergency scene, initial attack personnel find an imminent life-threatening situation where immediate action could prevent the loss of life or serious injury, such action is permitted with less than four personnel when conducted in accordance with NFPA 1500.*

*4.7.1 The Fire Department shall have the capability for sustained operations, including fire suppression; engagement in search and rescue, forcible entry, ventilation, and preservation of property; accountability for personnel; the deployment of dedicated rapid intervention crew (RIC); and provision of support activities for those situations that are beyond the capability of the initial attack.*

*4.8.1 Mutual aid, automatic aid, and fire protection agreements among the affected AHJs shall be in writing and address issues such as liabilities for injuries, disabilities, and deaths; cost of service; authorization to respond; staffing; and equipment including the resources to be made available and the designation of the incident commander.*

*4.9.2 The Fire Department shall clearly document its role, responsibilities, functions, and objectives for the delivery of EMS.*

*4.10.2 The Fire Department shall adopt a special operations response plan and SOPs that specify the role and responsibilities of the Fire Department and the authorized functions of members responding to hazardous materials emergency incidents.*

It is important to re-emphasize that NFPA standards are just that, "standards," and not mandatory by law for a Fire Department to meet. However, once an incident occurs, the Department will be judged on its performance as compared with the NFPA standards. It is not recommended that any department intentionally disregard these NFPA standards; rather, a department should work to meet them.

### *Recommendation – NFPA 1720*

- *The City should not adopt NFPA 1720 standard. Adoption would include the adoption of all OSHA and NFPA standards by reference included in the document. However, a plan should be developed to meet as many NFPA 1720 standards as possible in the future.* ***Priority 5***

## Occupational Safety and Health Administration (OSHA)

### *Mandatory*

*Note: Michigan refers to Michigan Admin. Code R 408.17451. Management of emergency operations*
*(e) A requirement that the procedures shall comply with the "two in/two out" rules as found in R 1910.134(g)(4), as adopted in Occupational Health Standard Part 451 "Respiratory Protection," as referenced in R 408.17405. This rule is comparable language to the OSHA description below:*

OSHA states that "once fire fighters begin the interior attack on an interior structural fire, the atmosphere is assumed to be "Immediately Dangerous to Life or Health" (IDLH) and section (g) (4) of OSHA's Respiratory Protection Standard, 29, CFR 1910.134 [**two-in/two-out**] applies." OSHA defines interior structural firefighting "as the physical activity of fire suppression, rescue, or both inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage." This rule is commonly referred to as the **"two-in/two-out" rule**, which is OSHA's mandatory requirement for interior firefighting.

OSHA requires that all firefighters engaged in interior structural firefighting must wear SCBAs. SCBAs must be NIOSH-certified, positive pressure, with a minimum duration of 30 minutes. [29 CFR 1910.156(f) (1) (ii)] and [29 CFR 1910.134(g) (4) (iii)]

OSHA requires that all workers engaged in interior structural firefighting operations beyond the incipient stage use SCBA and work in teams of two (2) or more. [29 CFR 1910.134(g) (4) (I)] Firefighters operating in the interior of the structure must operate in a buddy system and maintain voice or visual contact with one another at all times. This assists in assuring accountability within the team. [29 CFR 1910.134(g) (4) (I)]

## *Rapid Intervention Crew (RIC) Team/Mutual Aid*

OSHA requires at least one (1) team of two (2) or more properly equipped and trained firefighters to be present outside the structure before any team(s) of firefighters enter the structural fire. This requirement is intended to assure that the team outside the structure has the training, clothing, and equipment to protect them and, if necessary, safely, and effectively rescue firefighters inside the structure. For high-rise operations, the team(s) would be staged below the IDLH atmosphere. [29 CFR 1910.134(g) (3) (iii)]

OSHA requires that one (1) of the two (2) outside person's function is to account for and, if necessary, initiate a firefighter rescue. Aside from this individual dedicated to tracking interior personnel, the other designated person(s) is permitted to take on other roles, such as incident commander in charge of the emergency incident, safety officer, or equipment operator. However, the other designated outside person(s) cannot be assigned tasks that are critical to the safety and health of any other employee working at the incident.

Any task that the outside firefighter(s) performs while in RIC, standby rescue status, must not interfere with the responsibility to account for those individuals within the hazard area. Any task, evolution, duty, or function being performed by the standby individual(s) must be such that the work can be abandoned, without placing any employee at additional risk, if rescue or other assistance is needed [29 CFR 1910.134(g) (4) (Note 1)], Any entry into an interior structural fire beyond the incipient stage, regardless of the reason, must be made in teams of two (2) or more individuals [29 CFR 1910.134(g) (4) (I)].

## *Recommendation – OSHA*

- *The Fire Department leadership should continue to ensure that the OSHA "two-in/two-out" rule is practiced on all structure fires. Consideration of utilizing Automatic Aid Box Alarm Cards in certain situations should be explored in this endeavor.* ***Priority 1***

## Insurance Service Offices, Inc. (ISO)

*Non-mandatory*

The Insurance Services Office, Inc. (ISO) publishes and utilizes the Fire Suppression Rating Schedule (FSRS) to "review available public fire suppression facilities and to develop a Public Protection Classification (PPC) for insurance purposes."

Some insurance companies utilize this rating system to establish premium schedules for fire insurance. Communities with a lower rating can generally expect to have lower fire insurance premiums than those with higher ratings, thus creating an incentive for the community's investment in fire protection. However, insurance rates are often driven by a competitive market between insurance companies, with ISO having less significance.

## ISO Rating Factors

The classification of the fire protection assigned to a community is based on four categories:

- *Fire Department (50 percent)*
- *Water Supply (40 percent)*
- *Emergency Communication (10 percent)*
- *Community Risk Reduction (up to 5.5-point reduction)*

The Community Risk Reduction section of the FSRS offers a maximum of 5.5 points, resulting in 105.5 total points available in the FSRS. The inclusion of this section for "extra points" allows recognition for those communities that employ effective fire prevention practices, without unduly affecting those who have not yet adopted such measures. The addition of Community Risk Reduction gives incentives to those communities who strive proactively to reduce fire severity through a structured program of fire prevention activities.

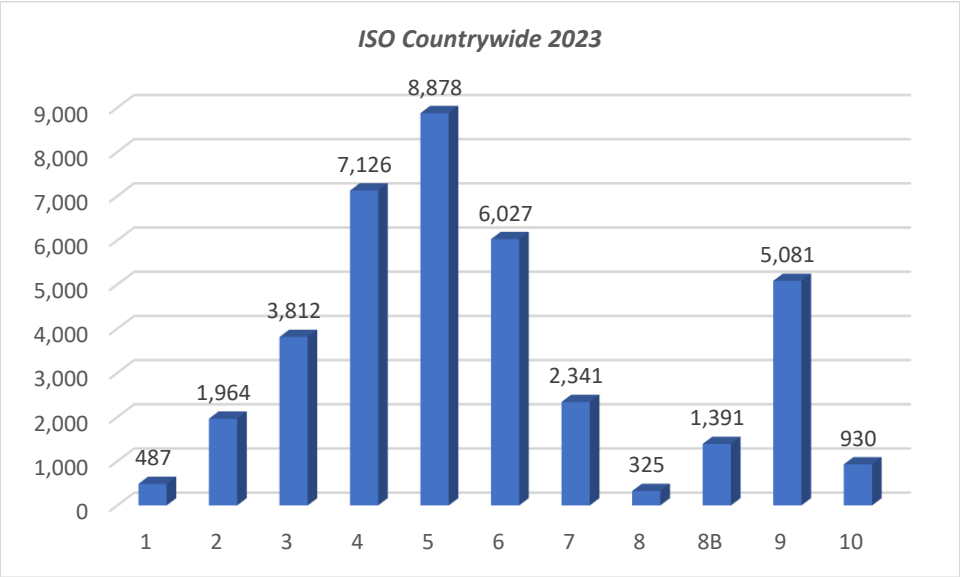
The areas of community risk reduction evaluated in this section include:

- Fire Prevention
- Fire Safety Education
- Fire Investigation

The total points are compared to a chart with ten (10) classes, each representing about 10 points, for a total of 100 points, excluding the influence of Community Risk Reduction (additional 5.50 points possible = total 105.5). Class 1 is the highest, and Class 10 is the lowest.

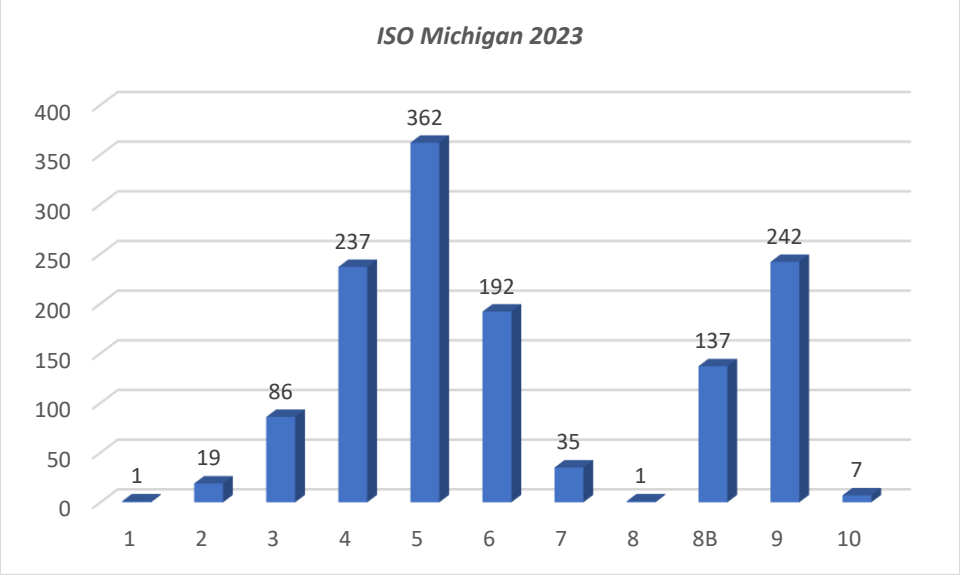
The figure below illustrates the classification category and number of departments (38,362) with the corresponding ISO class number on a national basis 2023 data:

***Chart 1: ISO Classifications – Countrywide 2023***




The State of Michigan had 1,319 departments evaluated by ISO in 2023 as illustrated in the chart below:

***Chart 2: ISO Classifications - Michigan 2023***




It is important to note what the ISO rating means to the City of Hastings. It wasn't until several years ago that ISO awarded any credit to the Fire Department for fire prevention and/or public safety education by adding 5.5 points to the 100 point program titled under the heading of Community Risk Reduction.

Moreover, about 90% of the insurance companies will group Classes 1 – 4 together, and then look separately at Class 5, Class 6, Class 7, and so on. In essence, the ISO rating is only one factor in establishing premiums and certainly not the primary one. It is this perceived link to insurance rates that for years has driven communities to base their decisions on the level of fire protection appropriate for their community, based upon ISO standards.

The value of the ISO rating continues to be questionable as a determining factor in a community's level of fire protection. The ISO survey is not a complete assessment of a community's fire protection program, defenses, or performance. The ISO does not rate the quality of the fire prevention program, built-in fire suppression systems, fire loss and property saved, or the actual competence and performance of the fire suppression personnel and operations. The ISO only rates those pieces of the fire protection program they feel are important to assign insurance rates.

## City of Hastings ISO PPC Scores

The Township was evaluated in November 2018 and the ISO Classification 04/07 became effective March 1, 2019. The classification of the fire protection assigned to a community is based on four categories:

- *Fire Department (50 percent)*
- *Water Supply (40 percent)*
- *Emergency Communication (10 percent)*
- *Community Risk Reduction (up to 5.5-point reduction)*

The City of Hastings receives two ISO Public Protection Classifications as illustrated below:

1. Fire Protection Service Area (FPSA) for areas within five (5) miles of the fire station and within 1,000 feet of a hydrant the PPC was a ***Class 4*** as illustrated below:

***Table 4: Hastings FD FPSA***

***PPC Review City of Hastings FPSA (City)***

| Feature | Credit Given | Maximum Credit |
|---|---|---|
| **Emergency Communications** | | |
| Credit for Emergency Reporting | 3.00 | 3.00 |
| Credit for Telecommunicators | 3.99 | 4.00 |
| Credit for Dispatch Circuits | 1.20 | 3.00 |
| ***Credit Received*** | ***8.19*** | ***10.00*** |
| **Fire Department** | | |
| Credit for Engine Companies | 5.19 | 6.00 |
| Credit for Reserve Pumpers | 0.00 | 0.50 |
| Credit for Pumper Capacity | 3.00 | 3.00 |
| Credit for Ladder Service | 3.92 | 4.00 |

***PPC Review City of Hastings FPSA (City)***

| Feature | Credit Given | Maximum Credit |
|---|---|---|
| Credit for Reserve Ladder & Service Trucks | 0.00 | 0.50 |
| Credit for Deployment Analysis | 8.12 | 10.00 |
| Credit for Company Personnel | 2.84 | 15.00 |
| Credit for Training | 2.87 | 9.00 |
| Credit for Operational Considerations | 2.00 | 2.00 |
| ***Credit Received*** | ***27.94*** | ***50.00*** |
| **Water Supply** | | |
| Credit for Supply System | 27.76 | 30.00 |
| Credit for Hydrants | 3.00 | 3.00 |
| Credit for Inspection & Condition | 3.20 | 7.00 |
| ***Credit Received*** | ***33.96*** | ***40.00*** |
| ***Divergence** | ***-5.80*** | |
| **Community Risk Reduction** | **3.83** | **5.50** |
| ***Total Credit*** | ***68.12*** | ***105.50*** |

**City Classifications: PPC Score Class 04.**

***Table 5: Hastings FD FDS***

***PPC Review City of Hasting FDS (District)***

| Feature | Credit Given | Maximum Credit |
|---|---|---|
| | | |
| **Emergency Communications** | | |
| Credit for Emergency Reporting | 3.00 | 3.00 |
| Credit for Telecommunicators | 3.99 | 4.00 |
| Credit for Dispatch Circuits | 1.20 | 3.00 |
| ***Credit Received*** | ***8.19*** | ***10.00*** |
| **Fire Department** | | |
| Credit for Engine Companies | 5.98 | 6.00 |
| Credit for Reserve Pumpers | 0.50 | 0.50 |
| Credit for Pumper Capacity | 3.00 | 3.00 |
| Credit for Ladder Service | 3.84 | 4.00 |
| Credit for Reserve Ladder & Service Trucks | 0.00 | 0.50 |
| Credit for Deployment Analysis | 3.27 | 10.00 |
| Credit for Company Personnel | 4.92 | 15.00 |
| Credit for Training | 2.87 | 9.00 |
| Credit for Operational Considerations | 2.00 | 2.00 |
| ***Credit Received*** | ***26.38*** | ***50.00*** |
| **Water Supply** | | |
| Credit for Supply System | 7.50 | 30.00 |

***PPC Review City of Hasting FDS (District)***

| Feature | Credit Given | Maximum Credit |
|---|---|---|
| | | |
| Credit for Hydrants | 3.00 | 3.00 |
| Credit for Inspection & Condition | 3.20 | 7.00 |
| ***Credit Received*** | ***13.70*** | ***40.00*** |
| ***Divergence** | ***-3.70*** | |
| **Community Risk Reduction** | **3.87** | **5.50** |
| ***Total Credit*** | ***48.44*** | ***105.50*** |

**District Classifications: PPC Score: Split Classification 06/10**

Split Classifications: **PPC Score Class 06/10**. The first number is the class that applies to properties within five (5) road miles of the responding fire station and 1,000 feet of a creditable water supply, such as a fire hydrant, suction point, or dry hydrant.

The second number is the class that applies to properties within five (5) road miles of a fire station but beyond 1,000 feet of a creditable water supply; as illustrated below: **PPC Score Class 70/10.**

Fire Department Supply (FDS) pertains to the Fire Department's ability to bring ample water to the emergency scene of properties that are beyond five (5) miles of a hydrant. The ISO factors are described below:

**ISO Water Supply FDS**

*Fire Department Supply*

- *Tender Supply*
- *Large Diameter Hose Lay*
- *Combination of both*

*Some components of ISO (FDS) will review are:*

- *Pumpers – Pump capacity, pump test records, "on-board" nominal tank size and equipment*
  - *Initial tanker response – Number of tankers, nominal tank size, and time to respond*
  - *Fill time of tankers*
  - *Dump times of tankers*
  - *Distance for travel from fire station to fire site and from fire site to supply site and return*
  - *Automatic Aid and/or Mutual Aid agreements*
  - *Number of tankers available from surrounding depts. and their nominal tank size*
  - *Large diameter hose – length is available, deployment and flow time*
  - *Hose diameter*
  - *Response distance of 2nd engine*

*Regardless of your choice, ISO will review the overall operation to determine what the weakest link is. Credit will only be given for the amount of water supply that can be sustained by the weakest link.*

### *Recommendation - ISO*

- *An ISO classification of Class 4 is a good rating. The Consultants do not believe any additional resources or fiscal commitment should be made to reduce the classification to a Class 3; rather, the Township should attempt to maintain the Class 4 rating in the future.* ***Priority 5***

- *A fire protection service area PPC score of 6/10 is an average score for a service area* approximately *135 square miles; however, the Consultants do not believe any additional resources or fiscal commitment should be made to reduce the classification.* ***Priority 5***

## Center for Public Safety Excellence (CPSE)

### *Non-mandatory*

A better evaluation tool exists today. The International Association of Fire Chiefs (IAFC) has developed a program that measures the quality and performance of a particular fire service agency and will award national accreditation to those departments that pass the stringent criteria. The Center for Public Safety Excellence (CPSE), the umbrella organization, utilizes a process known as the Commission on Fire Accreditation International (CFAI). It specifies more than 250 performance indicators, including 70+ core competencies against which a fire agency can measure itself.

The CFAI is a structured process for documenting the levels of fire safety, fire prevention, fire safety education, and fire suppression services currently provided, and for determining the future level of service the department should provide. The accreditation process asks the community to determine and document whether its fire protection services are appropriate, adequate, and effective.

The advantage to the CFAI accreditation program lies in the process itself. The department must examine every aspect of its existence and determine the most cost-effective means of providing service. This program requires time, commitment, and effort on the part of the fire administration.

Although the Consultants ***do not recommend*** the Department begins the accreditation process, it is suggested that the administration look at the performance indicators or benchmarks set up for the evaluation process to use as a guide while developing policies and procedures for their Department.

### *Recommendation – Accreditation*

- *The fire department should not seek international accreditation (CFAI) at this juncture; rather, the CFAI performance indicators and core competencies should be utilized as a model for quality and a benchmark for examining and evaluating current practices.* ***Priority 5***

## Data Management / Resource Deployment

The prime function of a fire department is to respond to emergencies. Although this activity only takes up a small percentage of the department's total time, its state of readiness must always be at a maximum. The challenge for Fire/EMS leadership is to identify the need for resources that will provide the highest level of service, safety for those who receive and provide that service, and justify the fiscal resources needed. Fire chiefs and department supervisors should utilize categories of data daily for a variety of leadership/management functions, including but not limited to:

- Fiscal management
- Accurate data management
- Staffing
- Resource deployment
- Budgeting
- Purchasing
- Strategic planning
- Program development/implementation
- Program oversight/assessment
- Assuring competency
- Assuring cost-effective/efficient services
- Communication with governing board(s)

Leadership can quantify the above objectives through good data. The International Association of Fire Chiefs (IAFC) defines good data as data that meets three (3) components:

- **Good Data is Relevant** – you are collecting information on the things that matter, like response times and number of calls for service.
- **Good Data is Accurate** – your processes for data collection must be consistent and trustworthy.
- **Good Data is Reliable** – a measurement from one company is equivalent to the same measurement from another company. You don't have to "adjust your data to accommodate known distortions".

Source: International Association of Fire Chiefs: Weathering the Economic Storm, December 2008

## Hastings Fire Department Data

*"You can't manage what you can't measure."*

## Fire Service Data Crossroad

The Fire/EMS profession continues to struggle with the understanding and utilization of data. The National Fire Protection Association (NFPA) conducted a national survey pertaining to data from which two themes emerged:

1. *Data, as it is currently being collected, is problematic and is not used to its full potential.*

2. *Data has significant untapped value and potential for the Fire Service to improve service delivery, resource planning, and increasing community safety.*

The survey asked Fire/EMS leasers to describe data in one word and is illustrated in the figure below:

***Figure 1: Data Description***


*Source: NFPA Research – National Fire Data Survey*

Although almost every fire department retains data about the services they provide, many treat their databases as junk drawers of information and are unwilling or unable to excavate and interpret the data for their benefit. When department leadership has difficulty presenting meaningful data, it is safe to assume that the use of data plays a minimal part in the daily management of those organizations. For example, if a department responded to 1,000 incidents a year and those incidents are divided into categories of: by month, day of the week, time of day, station, shift, etc., the totals should all be 1,000. When they are not, one must question the validity and quality of all their data.

### *Hastings Record Management System*

The HFD switched its Record Management System (RMS) to ESO in 2020, prior to ESO the Department utilized FireTools RMS. The data from the FireTools RMS was not able to be retrieved therefore much of

the important data for this study is unavailable. The data provided by the Fire Department falls short of the definition of good data by the IAFC.

The Consultants were informed that each incident is recorded on a handwritten sheet and later entered into the ESO RMS. There are several concerns about this practice:

At what point does a Fire Department document become a record? When the City or Fire Department needs it as evidence of a decision or action.

Incident Records should be:

- **Immediate**: the senior member of the responding shift should enter the incident data into the ESO RMS *immediately* after returning to the station. Critical information about the event should be noted in the RMS.

- **Accurate:** it is essential that the report be as actual occurrence of the incident. Assumptions and opinions of the individual should be limited, and factual information emphasized.

- **Reviewed:** The officer in charge of the shift should review the RMS entry prior to it being entered into ESO.

Having a third party enter the incident data from a written form into the ESO RMS is duplication and greatly increases the chance for entry error. A third party entering an incident into ESO who was not on the incident makes the report subjective. All the Fire Department needs to record and retrieve can be achieved through ESO RMS which is supported through the State Fire Marshal's Office. The main reason heard by the Consultants is that members do not know how to enter data into the record management system. Ironically, one of the major sales points of ESO is the use of the RMS. Therefore, all members should be taught how to enter data into ESO.

## *Recommendation – Single Source of Data*

- *The Fire Department should seek training in the use of their data management system ESO for all members who might be recording an incident; most providers of an RMS offer such training and in Hastings' situation they could use "train the trainer" of RMS incident recording who in return would train the Department members.* ***Priority 1***

- *Officers from Lieutenant through Fire Chief. This training should include entering as well as important data retrieval.* ***Priority 1***

- *The Fire Department would benefit from a data quality assurance program to maintain data integrity.* ***Priority 2***

## National Fire Incident Reporting System (NFIRS)

The Hastings Fire Department participates in the National Fire Incident Reporting System (NFIRS). This is a nationwide network of reporting Fire/EMS incidents into the national reporting system through the U.S. Fire Administration (USFA). Michigan's Bureau of Fire Services (BFS) serves as the State's Program Manager of the NFIRS 5.0 program developed by the United States Fire Administration (USFA) in partnership with National Fire Information Council (NFIC) where data is gathered, studied, and released via various reporting systems.

### Michigan State Law – NFIRS

> *Sec. 29.1. According to public act 207 of 1941. Section 29 1c (2c), the Bureau of Fire Services shall participate in the National Fire Incident Reporting System (NFIRS). The national reporting system has been designed as a tool for fire departments to report and maintain computerized records of fires and other fire department incidents in a uniformed manner. Section 29.4 and 29.5g of Public Act 207 of 194 requires the chief of each organized fire department, or the clerk of each City, village, or township that does not have an organized fire department, immediately after the occurrence of fire within the official's jurisdiction resulting in loss of life or property, shall make and file with the bureau a complete fire incident report of the fire. The report shall be made on and according to forms supplied by the bureau (BFS).*

### *NFIRS Categories*

NFIRS categorizes incident types into nine (9) categories with each category having a series number with multiple sub-categories under each main series number. The USFA collects and analyzes NFIRS data from participating states to provide a legal record of fact, to assist fire department administrators in evaluating their fire and EMS effectiveness, and to collect data for use at the State and National levels. The figure below illustrates the nine (9) major and all subcategories of NFIRS:

***Figure 2: NFIRS Nine Categories***

| **Fire Series 100** | **Overpressure/Explosion Series 200** | **Rescue /EMS Series 300** |
|---|---|---|
| • Structure Fires<br>• Fire in mobile property used as a fixed structure<br>• Mobile property (vehicle) fire<br>• Natural vegetation fire<br>• Outside rubbish fire<br>• Outside fire<br>  o Mulch<br>  o Outside equipment<br>  o Outside gas or vapor<br>• Cultivated vegetation, crop fire (not harvested) | • Overpressure rupture from steam – no fire<br>• Overpressure rupture from air or gas – no fire<br>• Overpressure rupture, chemical reaction – no fire<br>• Explosion – no fire<br>• Excessive heat, scorch burns with no ignition | • Medical assist<br>• Emergency medical service incident<br>• Lock-in<br>• Search for lost person<br>• Extrication, rescue<br>• Water or ice-related rescue<br>• Electrical rescue<br>• Rescue or EMS standby |
| **Hazardous Condition Series 400** | **Service Call Series 500** | **Canceled, Good Intent Series 600** |
| • Combustible/Flammable spills and leaks | • Person in distress<br>• Water problem<br>• Smoke problem | • Dispatched and cancelled enroute |

| | | |
|---|---|---|
| • Chemical release, reaction, or toxic condition<br>• Radioactive condition<br>• Electrical wiring/Equipment problem<br>• Biological hazard<br>• Accident, potential accident<br>• Explosive, bomb removal<br>• Attempted burning, illegal action<br>• Hazardous condition, other | • Animal problem or rescue<br>• Public service assistance<br>• Unauthorized burning<br>• Standby at fire station | • Wrong location, no emergency found<br>• Controlled burning<br>• Vicinity alarm<br>• Steam, other gas mistaken for smoke<br>• EMS call – Patient left before arrival<br>• Haz-Mat release investigation w/no Haz-Mat found |
| **False Alarm / False Call Series 700** | **Severe Weather Series 800** | **Special Incidents Series 900** |
| • Malicious, mischievous false alarm<br>• Bomb scare<br>• System or detector malfunction<br>• Unintentional system or detector operation (no fire)<br>• Biohazard scare | • Earthquake assessment<br>• Flood assessment<br>• Windstorm, tornado/hurricane assessment<br>• Lightning strike (no fire)<br>• Severe weather standby | • Citizen's Complaint<br>• Report of Code or Ordinance Violation |

## *Hastings NFIRS Data*

The following table and figures reflect the three-year study period emergency activities of the HFD utilizing the NFIRS series categories:

***Table 6: Hastings NFIRS Data***

| NFIRS Series | Nature of Call | Totals 2020 | Totals 2021 | Totals 2022 | 2 Yr. HFD % | National % |
|---|---|---|---|---|---|---|
| 100 | Fires | Not Available | 64 | 61 | 7.4% | 4.7% |
| 200 | Overpressure/Explosion | | 0 | 0 | 0.0% | 0.2% |
| 300 | Rescue/EMS | | 325 | 369 | 41.3% | 64.1% |
| 400 | Hazardous Conditions | | 100 | 107 | 12.3% | 3.7% |
| 500 | Service Calls | | 59 | 47 | 6.3% | 7.1% |
| 600 | Good Intent Calls | | 168 | 203 | 22.1% | 10.5% |
| 700 | False Alarm/False Calls | | 82 | 92 | 10.4% | 8.7% |
| 800 | Severe Weather | | 1 | 0 | 0.1% | 0.1% |
| 900 | Special Incident | | 1 | 0 | 0.1% | 0.7% |
| | ***Total Calls*** | ***594*** | ***800*** | ***879*** | 100.0% | 100.0% |

How the Department actually inputs the NFIRS data is somewhat subjective. The Consultant understands that the Department's data indicates that category 700 False Alarms is only less than 2% above the National average; however, false alarms should warrant special attention.

**Series 700 – False Alarms/Calls**

This category includes any type of reported emergency which ultimately was determined to be a false call. The sub-categories are:

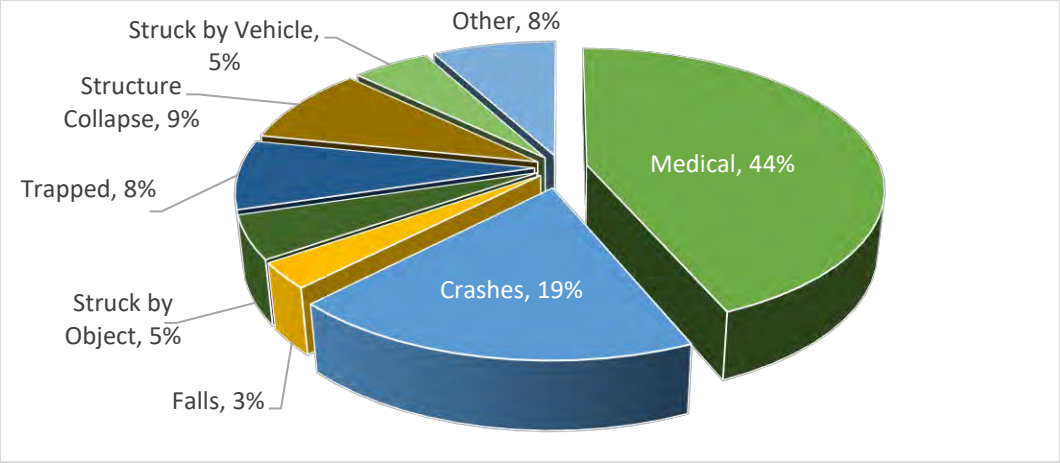
- *Malicious, mischievous false alarm*
- *Bomb scare*

- *System or detector malfunction*
- *Unintentional system or detector operation (no fire)*
- *Biohazard scares*
- *False alarm and false call, other*

The national average is 8.7% whereas the HFD is at 10.4% which indicates the Fire Department is 1.7% higher than the national average for False Alarms.

***Why is the above important?*** False alarms are a drain on a department's resources, prevent personnel from responding to actual emergencies, and increase the chances for vehicle accidents. Not only does the resolution of false alarms reduce unnecessary emergency responses, it also is a significant safety factor for the community as well as the service providers overall. Vehicle accidents (responding to or returning from) are the second leading cause of firefighter/EMT line-of-duty deaths as illustrated in the chart below:

***Chart 3: Causes of FF Line of Duty Deaths***




*Source: NFPA Firefighter Deaths by Cause of Injury*

## *Recommendation – False Alarms*

- *Reduction of false fire alarms can be reduced by regular maintenance, public education, fire inspections, immediate follow-up on all false alarms by the FD. The Department should implement these steps, as necessary.* ***Priority 3***

## 10-Year Emergency Activities

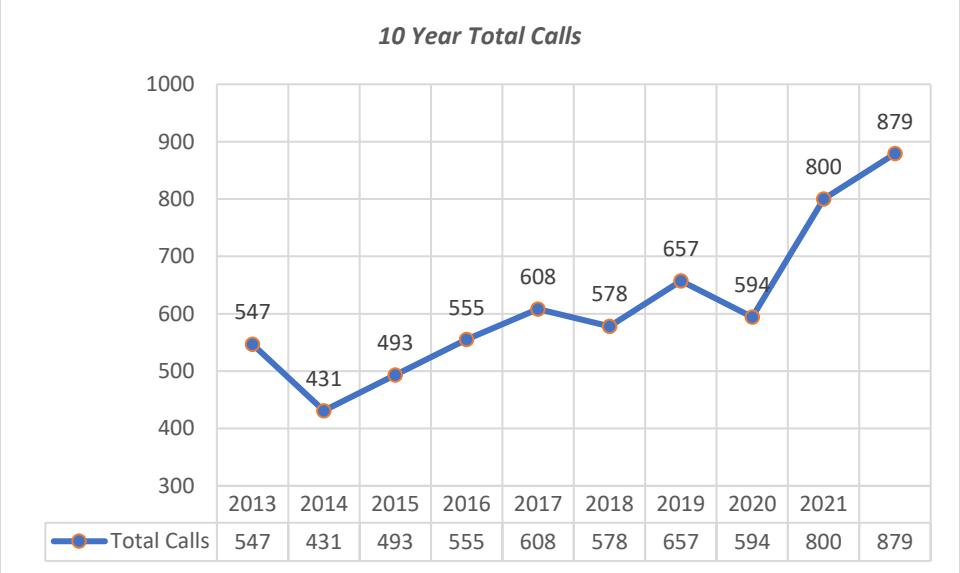
The tables and chart below illustrate the total emergency incidents from 2013 to 2022 along with the yearly percentage of change. The average change in the 10-year call totals is an average increase of 6.51%.

***Table 7: 10-Year Incident Change***

| Year | Total Calls | % + or - | City | | Rural | |
|---|---|---|---|---|---|---|
| | | | Total | % of Total | Total | % of Total |
| 2013 | 547 | | 208 | 38.03% | 339 | 61.97% |
| 2014 | 431 | -21.21% | 180 | 41.76% | 251 | 58.24% |
| 2015 | 493 | 14.39% | 212 | 43.00% | 281 | 57.00% |
| 2016 | 555 | 12.58% | 213 | 38.38% | 342 | 61.62% |
| 2017 | 608 | 9.55% | 225 | 37.01% | 383 | 62.99% |
| 2018 | 578 | -4.93% | 240 | 41.52% | 338 | 58.48% |
| 2019 | 657 | 13.67% | 285 | 43.38% | 372 | 56.62% |
| 2020 | 594 | -9.59% | 231 | 38.89% | 363 | 61.11% |
| 2021 | 800 | 34.68% | 373 | 46.63% | 427 | 53.38% |
| 2022 | 879 | 9.50% | 381 | 43.34% | 498 | 56.66% |

*Average increase of 6.51% in 10-years*

***Chart 4 10-Year Incident Change***




## Incidents by Nature

When determining the Department's efficiency and/or addressing future resource needs, it is prudent to examine the historical occurrences of emergencies. The following factors are of significant importance to the Township when examining call data:

- Calls by month
- Calls by day of the week
- Calls by time of day

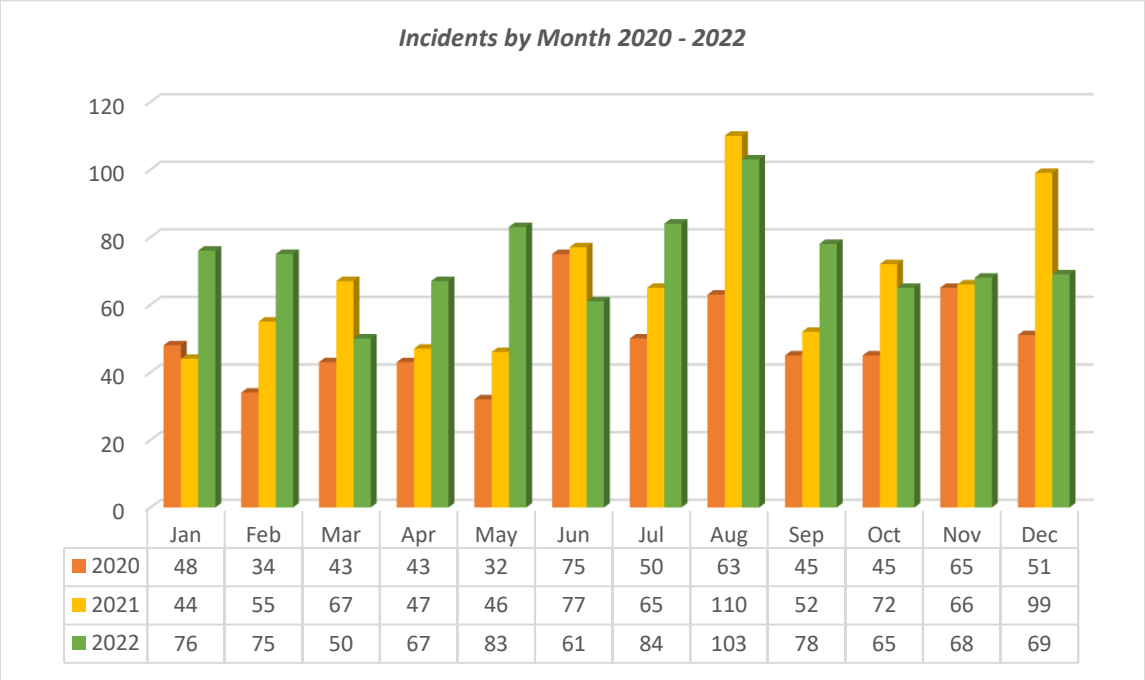
- Overlap/Simultaneous incidents
- Incidents by City/Districts
- Mutual aid/Automatic aid
- Mutual aid box alarm system

## Incidents by Month

Fire Department leadership should be particularly interested in data which indicates when the Department is at its busiest for the month, day of the week, and time of day. When a significant pattern is discovered, it indicates the probability that emergency incidents will occur at a certain time and allows the Department to anticipate staffing levels (peak staffing) and make contingency plans for adequate personnel or other resources needed for emergency response.

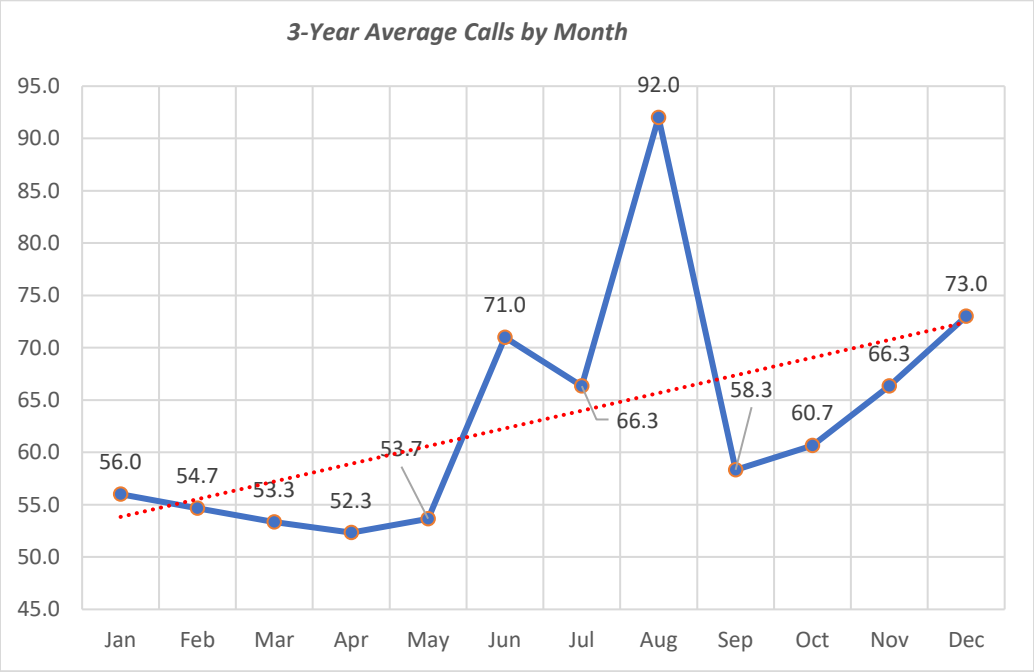
The charts below illustrate the three (3) years of data for incidents by month.

***Chart 5: Incidents by Month 2020 - 2022***




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2020 | 48 | 34 | 43 | 43 | 32 | 75 | 50 | 63 | 45 | 45 | 65 | 51 |
| 2021 | 44 | 55 | 67 | 47 | 46 | 77 | 65 | 110 | 52 | 72 | 66 | 99 |
| 2022 | 76 | 75 | 50 | 67 | 83 | 61 | 84 | 103 | 78 | 65 | 68 | 69 |

***Chart 6: 3-Year Average Calls by Month***




## *Incidents by Day of the Week*

Incidents reviewed by day of the week is another metric that should be utilized by leadership to manage the resources of the Department. Coupled with time of day and perhaps incidents by month, this information could be of value if a pattern emerges suggesting staffing or resource deployment might change. The chart below illustrates calls by day of the week for HFD:

No Data

## *Incidents by Time of Day*

In most departments, incidents charted by time of day follow a pattern similar to a 'bell curve.' The least busy time of day is from midnight to early morning, peaking in the mid to late afternoon, and decreasing in the later evening hours. Although the least busy time of day is from midnight to early morning, it is also when the highest number of civilian fire deaths occur, due to the occupants sleeping. Those most at risk are the very young and old, who often are less able to escape and protect themselves.

No Data

## *Overlapping Incidents (aka: Simultaneous)*

The collection and review of data regarding overlapping/simultaneous calls is advantageous to the Fire Department leadership in determining resource deployment, staffing, budgeting, and planning. The term overlapping/simultaneous incident is a term utilized by different data management systems that refers to

times when the Fire Department is handling an emergency situation and *another* unrelated emergency incident occurs, requiring immediate response.

Fire Departments do not have the ability to "stack calls" as do police agencies who routinely prioritize calls and dispatch accordingly. With a few exceptions, when 9-1-1 requests the Fire Department it is for an emergency – at least in the opinion of the caller.

If every piece of fire or EMS apparatus were available at its assigned location every time a call for service was received the Fire Department's reliability* would be 100%. If, however, a call is received for a station/unit, but that station/unit is already committed to another incident, the next closest unit must respond from a different station or source. In this case, the substitute company may exceed the maximum prescribed response time. As the number of emergency calls per day increase, the probability increases that the primary unit needed for response is already committed and a backup or mutual aid unit will need to be dispatched. Today in most Fire Departments overlapping/simultaneous calls are EMS in nature.

> ***Reliability** is the probability that the resource/apparatus assigned to a territory will be available to respond from within that territory when an emergency occurs in that area. There are times a call is received when the first-due company is out of the area or unavailable. When that occurs, the next closest unit must respond, resulting in a possible elongated response time.*

No Data

## *Incidents by City/District*

Calls that originate in the City are recorded by the Ward in which they occurred. The City is divided into four (4) Wards with the number and three-year study period totals of incidents occurring in each over the three-year study period as illustrated below:

***Table 8: Incidents by City Wards 3-Years***

| City | 2020 | 2021 | 2022 | Total |
|---|---|---|---|---|
| 1st Ward | 51 | 103 | 107 | 261 |
| 2nd Ward | 56 | 78 | 87 | 221 |
| 3rd Ward | 58 | 89 | 94 | 241 |
| 4th Ward | 66 | 93 | 93 | 252 |

Calls that originate in the Districts are shown in which Township they occurred. The three-years number for each year and study period total is illustrated in the table below:

***Table 9: Incidents by Townships***

| District | 2020 | 2021 | 2022 | Total |
|---|---|---|---|---|
| Baltimore | 41 | 62 | 81 | 184 |
| Carlton | 46 | 55 | 61 | 162 |
| Hastings | 80 | 120 | 115 | 315 |
| Irving | 62 | 54 | 43 | 159 |
| Rutland | 110 | 120 | 185 | 415 |

*Total call data for each year conflicts with other data provided.*

## *Mutual/Automatic Aid*

***Mutual Aid:*** The philosophical concept is to offer assistance to a fire department upon a request made by a host department. The sole purpose is to give or receive assistance when all available resources—equipment or personnel—are depleted, and then on a limited basis. Generally, mutual aid is drawn upon during an emergency incident where a particular or specialized need arises on a small to medium size incident that would not be expected as a lengthy or long-term incident.

***Automatic Aid:*** Differs from mutual aid in that it is a pre-determined agreement with another department to respond automatically when the host department receives a reported emergency or an alarm at a given location or area. This type of aid is utilized on a regular basis to supplement the host agency's initial response to the emergency with pre-determined apparatus, manpower, and chief officers, and is done so automatically.

## *Hastings Fire Department Mutual Aid*

The Fire Department does keep records of mutual aid received for both the City and District for the three (3) year period. It does not appear that the Department has any automatic aid but utilizes mutual aid:

***Table 10: Mutual Aid Received and Given***

| **Aid Received** | **2020** | **2021** | **2022** | Total |
|---|---|---|---|---|
| City | 3 | 5 | 20 | 28 |
| District | 12 | 20 | 15 | 47 |
| | | | | 75 |
| **Aid Given** | **2020** | **2021** | **2022** | **Total** |
| District | 24 | 16 | 21 | 61 |

In some studies, the Consultants have found that governing officials believe that requesting assistance from other service providers on a routine basis will preclude them from having to add additional personnel, pay overtime, or provide more apparatus. This thinking is greatly flawed as the foundation of mutual and automatic aid is the reciprocity of services. It appears the Hastings data indicates the proper usage of mutual aid.

## Mutual Aid Box Alarm System (MABAS)

The Mutual Aid Box Alarm System currently includes six (6) Midwest states: Michigan joined Illinois, Wisconsin, Indiana, Missouri, and Iowa. Fire departments in the following states are considering joining the MABAS system: Minnesota and Ohio.

The MABAS system has been recognized as the "best practice" by the Department of Homeland Security and is currently being considered as the model for inter-state mutual aid agreements. The concept behind MABAS is that a fire department develops an alarm card, which will indicate what apparatus/equipment

and/or personnel they are requesting, who they are requesting it from, and what level (how much/many resources) is desired prior to the actual emergency. The MABAS cards are designed to cover a generic situation and/or area of response district. Different cards are designed for situations such as tender box (requiring large amounts of water to be trucked in), mass casualty box, confined space box, hazardous material box, grass/brush fire box, etc. A portion of the card is classified with the lowest alarm (still alarm) and progresses in magnitude in the following order, box, 2nd, 3rd, 4th, and 5th alarm. Each alarm will bring in additional apparatus as designated by the host department (community having the emergency).

The card also designates the type of equipment to be sent and from which department. For example, a typical card will have an alarm classification heading (i.e., engines, tankers, trucks, ambulance, Fire Chiefs, and special equipment).

Another portion of the MABAS Box Card designates the departments that are to change quarters to the stricken community. Changes of quarter units respond from their respective communities and staff the fire/EMS station of the stricken community until the time that community can cover additional calls itself.

MABAS cards are a predetermined assessment of the fire and/or EMS risk in a community and can be changed (additional equipment requested) during the course of an incident. The value of such a card is the fact that it releases the command officer from the need to recall what equipment is available and where it might come from during stressful times.

Most MABAS cards are designed to take a minimum amount of resources from any neighboring community, thereby allowing that community to adequately protect its own district. Therefore, it is common to have numerous departments respond to an incident versus only a few departments with multiple apparatus and staffing.

By utilizing the MABAS system, the fire department automatically has the ability to utilize apparatus from other MABAS subscribers in other divisions (areas). Therefore, if a named community is unable to respond for any reason, MABAS has the ability to automatically fill that position with another unit.

Currently, the Barry County Emergency Management Director is in the process of coordinating the various fire and emergency medical providers into becoming a MABAS division.

### *Recommendation – MABAS*

- *The City should provide as much influence and support to the Emergency Management Directors efforts in creating a MABAS division that includes their fire and EMS providers.* ***Priority 1***

# Personnel Management

## Employee Definition

To evaluate the human resource practices of the organization, we must first clarify the definition of an employee. Keep in mind, the Department is a Department of a City organization; thus, Federal and State labor laws apply, including the definition of an employee and the types of employees allowed under the Fair Labor Standards Act (FLSA). The Fair Labor Standards Act is the Federal law passed in 1938 to regulate minimum wages, overtime pay, equal pay, and child labor standards in employment. In 2004 the Federal regulations were amended with clarifications to the Federal exemptions for the overtime provisions as well as clarifications with municipal employees.

This section delineates the regulations of the FLSA as it applies to forms of employment including volunteer/paid-on-call. Thus, how the individuals are classified and how they are compensated will be the determining factors in the Department's obligations under the FLSA. When Federal and State FLSA regulations conflict, the ruling is based on what is most beneficial for the employee.

## FLSA Regulations

The FLSA covers a broad range of employers. An employer, unlike under other employment laws, does not need to employ a threshold number of employees to be covered. An organization must comply with the FLSA if the organization *Is engaged in interstate commerce and has a gross income of $500,000.*

The next question to ask is what is an employee? The definition of an employee under FLSA is an individual who performs services for the 'employer.' If an individual is not an employee, he or she is not covered by the minimum wage, overtime, recordkeeping, and other provisions of the FLSA.

**Volunteers/Paid-on-Call:** The FLSA provides a specific exemption for individuals who volunteer services to public agencies. The FLSA, however, exempts employers from paying minimum wage and overtime to individuals who qualify as 'volunteer/paid-on-call' – individuals motivated to contribute service for civic, charitable, or humanitarian reasons. An individual who performs services for a public agency qualifies as a volunteer/paid-on-call, if:

- The individual receives no compensation, or is paid *expenses, reasonable benefits, or a nominal fee* to perform the services for which the individual volunteered; and
- Such services are *not the same type of services* for which the individual is employed to perform for *the same public agency.*

If an individual meets the above criteria for volunteer/paid-on-call status, he or she will not be considered an employee covered by FLSA minimum wage and overtime provisions. *An employer can pay a nominal fee to volunteer/paid-on-calls; the fee must not be a substitute for wages and must not be tied to productivity*. Thus, a paid-on-call member, performing public safety responsibilities, and who does NOT

receive compensation that is tied to productivity, such as an hourly wage, would also be exempt from the minimum wage requirements.

**Paid-on-Call, Full/Part-time or Paid-on-Premise Personnel:** Individuals who receive some sort of compensation or nominal fee will have their employment status based upon how the fee is distributed. Two types of compensation are considered to be nominal fees by the Department of Labor (DOL) and continue to exempt the employee from the Fair Labor Standards Act – Pay-per-call, or a monthly/annual stipend. Pay-per-call, whether the person responds from their home or place of employment or is scheduled for hours at the fire station (paid-on-premise), is compensation paid to the individual when responding to an emergency call. The amount of *compensation may not be tied to productivity and may not vary on time spent on the activity*. The Department of Labor's regulations specify that the payment of a nominal amount on a per-call basis to volunteer/paid-on-call Firefighters is acceptable so long as the compensation is tied to the volunteer/paid-on-call's sacrifice rather than productivity-based compensation. (DOL, Wage and Hour Division Opinion Letter, August 7, 2006.)

However, the Department of Labor has determined that payment to volunteer/paid-on-call Firefighters on a per-hour basis destroys the bona fide volunteer/paid-on-call status and creates an employment relationship. This type of payment is akin to hourly wages based on productivity (DOL, Wage and Hour Division Opinion Letter July 7, 1999). Any employee, regardless of volunteer, full, or part time status, that receives an hourly wage is now considered to be an employee and must follow all of the FLSA regulations. This includes documenting of pay, payment of minimum wage, and payment of overtime for all hours worked within a specified pay cycle.

Employees cannot 'volunteer' to work for the Department outside their scheduled hours. Any time the employee responds to a call or is scheduled to work must be counted as hours worked and overtime paid, if earned.

The Department provided a list of 2023 base pay rates for its members. There appears to be an hourly rate for each employee, and another rate for calls outside of the City. Any employee who is receiving an hourly rate of pay will be considered an employee, and subject to all of the FLSA provisions, including overtime.

The members of the Department are considered to be employees and would fall under the definition of hourly per the Employee Handbook. Throughout the rest of the Personnel Management section, the term 'employee' will be used for volunteers, part-time and full time employees within the Fire Department.

## Stipends

Members receive a stipend for responding to calls. It is understood by the Consultants that the stipend is provided regardless of whether one does or does not respond to calls. Some commented that this 'wasn't fair' as some respond to calls, but still received the same amount as those who did not.

This perceived practice goes against the Policy Manual which requires members to respond to 50% of the calls. Further, participation in calls and training was reviewed every six (6) months yet the stipend is paid quarterly. The City should review its practices to ensure that the stipend is being paid to those who are actually participating in calls.

The City should consider paying the stipend based on the number of calls. If the City continues to treat fire personnel as volunteers, the annual stipend should be placed in a pool and divided into quarters. Personnel are then paid when this pool is divided by the number of personnel and the number of calls.

## FLSA CYCLE

The City Fire Department must comply with the Fair Labor Standards Act. The basic regulation under the FLSA is the payment of overtime. According to the FLSA, individuals who work more than 40 hours per week are entitled to compensation at time and one-half. Under the FLSA, a municipality can designate a work cycle for fire and police departments utilizing the 7K exemption component for relief of overtime. FLSA allows the municipality the ability to designate a work cycle from 7 to 28 days. Each day has an associated number of hours that the employee is allowed to work before the payment of overtime. Hours actually worked over the allowable amount under the law must be paid at one and one-half the normal rate.

***Table 11: FLSA Table for Fire Departments***

| Cycle | Hours Allowed | Hours Worked | FLSA Overtime |
|---|---|---|---|
| 28 | 212 | 224 | 12 |
| 27 | 204 | 216 | 12 |
| 26 | 197 | 208 | 11 |
| 25 | 189 | 200 | 11 |
| 24 | 182 | 192 | 10 |
| 23 | 174 | 184 | 10 |
| 22 | 167 | 176 | 9 |
| 21 | 159 | 168 | 9 |
| 20 | 151 | 160 | 9 |
| 19 | 144 | 152 | 8 |
| 18 | 136 | 144 | 8 |
| 17 | 129 | 136 | 7 |
| 16 | 121 | 128 | 7 |
| 15 | 114 | 120 | 6 |
| 14 | 106 | 112 | 6 |
| 13 | 98 | 104 | 6 |
| 12 | 91 | 96 | 5 |
| 11 | 83 | 88 | 5 |
| 10 | 76 | 80 | 4 |
| 9 | 68 | 72 | 4 |

| Cycle | Hours Allowed | Hours Worked | FLSA Overtime |
|---|---|---|---|
| 8 | 61 | 64 | 3 |
| 7 | 53 | 56 | 3 |

The consultant recommends that the City adopt the 28-day work cycle for all employees within the Fire Department. All hours must be tracked and any hours that exceed 212 hours in the 28 day cycle must be paid at time and one-half. Again, the probability that this will occur is slim, however, the City must comply with the FLSA record requirements.

An alternative to being an employee is to pay all members of the Fire Department with a stipend. Thus, they would receive a rate of pay for attendance at calls, training, meetings, and the amount would not vary based upon the amount of time spent at the activity. This then, would classify the members as volunteers and all FLSA provisions for minimum wage, and overtime would not be needed by the City.

## 7G Exemption

Nothing in the FLSA prohibits an employer from paying an employee at different rates of pay for various types of work as long as the rate is not less than minimum wage. If an employee meets certain conditions, Section 7(g)(2) permits an employer to pay an employee overtime compensation at one and one-half times a different hourly rate than the employee's regular rate. The employer must satisfy the following four (4) requirements:

- *The employee must perform two or more kinds of work;*
- *The employer must establish a bona fide different hourly rate for those different kinds of work;*
- *The compensation must be paid pursuant to an agreement or understanding arrived at between the employer and the employee in advance of the performance of the work; and*
- *The compensation must be computed at rates not less than one and one-half times such rates applicable to the same work when performed during non-overtime hours.*

This provision of the FLSA would apply to a few different situations that are occurring within the Fire Department. This would be attendance at meetings, training dates, and the employee who is also employed in a different City Department. The City can set a different hourly rate of pay for attendance at training and or meetings. This rate cannot be less than Michigan minimum wage law. These hours, however, will count towards the calculation of overtime.

The individual who is a volunteer Firefighter and a full-time public works employee will need to have all hours worked, regardless if in public works or in firefighting duties, compensated for by the City. In this

case, the City will need to distinguish between hours worked over 40 in a defined work week as the employee would not qualify under the 7K exemption for hours worked in public works.

## Determining Overtime at Different Rates of Pay – Blended Rate

The general rule is that one must count all hours worked in both positions and at all rates towards the weekly total for the purposes of determining whether the employee is owed overtime. When an employee receives different hourly rates of pay, the regular rate is determined by dividing the total compensation received during the work week by the total number of hours worked. This will produce a 'weighted average' or 'blended' rate (29 C.F.R. § 778.115).

***Blended Rate Example:***

Employees with multiple rates (whether because they provide two or more functions or hold two or more positions), must be compensated using a blended or weighted calculation process. The following Table illustrates a multiple rate calculation using a blended method.

***Table 12: Blended Overtime Calculation Example***

| Rate Description | Hourly Rate | Number of Hours Worked | Gross Pay |
|---|---|---|---|
| **Other Town Position Rate** | **$20.00** | **40** | **$1,000.00** |
| **Call Rate** | **$25.00** | **5** | **$ 125.00** |
| **Training Rate** | **$10.00** | **3** | **$ 30.00** |
| | | **Total Gross Wages** | **$1,155.00** |
| | | **Gross Wages ($1,155.00) divided by number of hours worked (48) = Blended Rate** | **$ 24.06** |
| | | **Half of the Blended Rate ($12.03) is the additional overtime pay ($12.03 x 8 OT hours)** | **$ 96.24** |
| | | **Total Gross Wages (gross + overtime)** | **$1,251.24** |

This same process would be completed if the City determines a different hourly rate of pay for training and or attendance at meetings, and the employee then worked more than 212 hours in the 28 day cycle.

## FLSA Exempt Status and Multiple Positions

The City is experiencing a scenario that an employee holding multiple positions is exempt from FLSA, meaning that because of their primary position, they do not qualify for overtime. The City must be careful in that when an individual holds multiple positions, its exemption status from overtime must be considered based on the totality of the position's duties and responsibilities for both positions. As a result, an exempt employee who holds a secondary non-exempt position could lose the exemption for both positions; and would qualify for overtime for both positions. This will have to be analyzed each time the City has an employee holding multiple positions.

### *Recommendations- Employee Status*

- *The City needs to determine if they are going to treat members of the Fire Department as employees and follow all FLSA regulations; Or as volunteers and determine stipends for the types of activities the Department wants to compensate members for.* ***Priority 1***

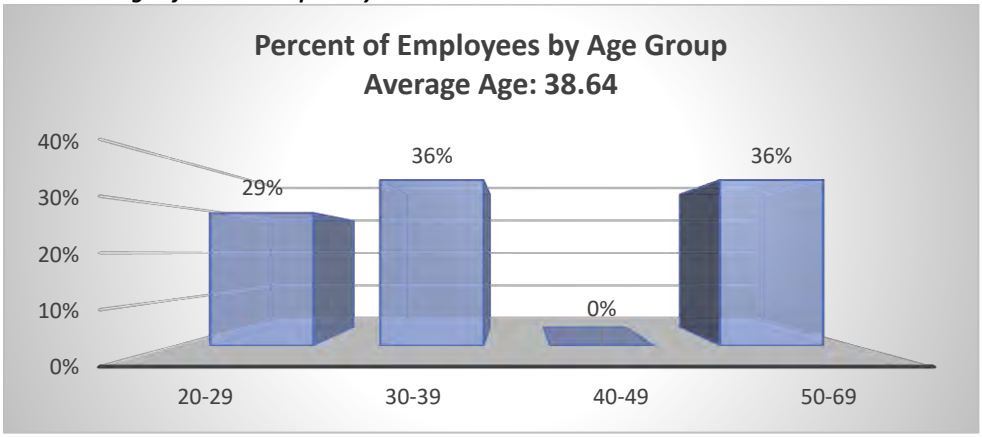
- *The City needs to ensure that the employee who works in two different departments, or had separate rates of pay, complies with FLSA in calculating overtime* **. *Priority 1***

- *When treating members of the Fire Department as employees, the City must establish an FLSA cycle, and begin to track all hours worked for the purposes of overtime.* ***Priority 1***

## Employee Demographics

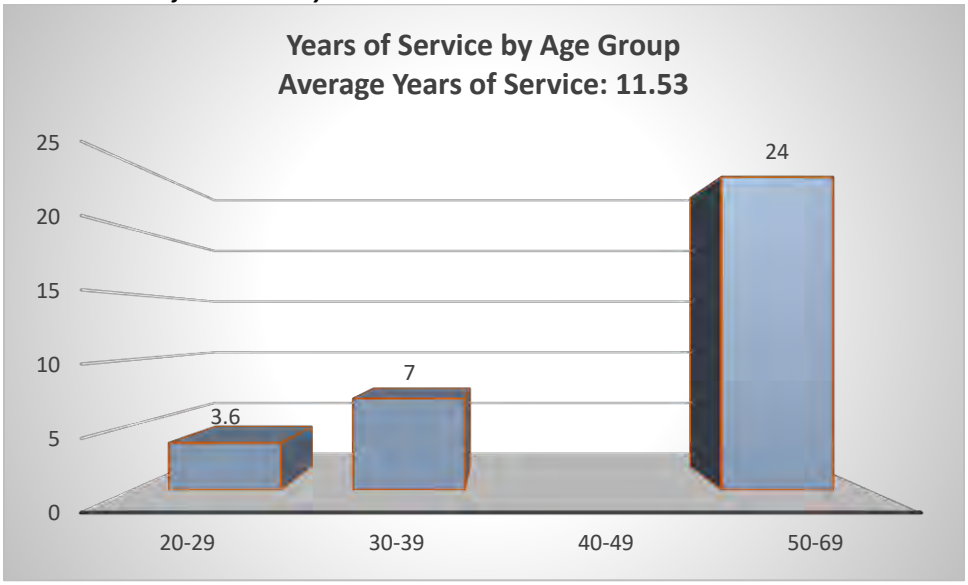
The Department provided the date of birth of active members. Knowing this information can assist a Department in future planning. Recruitment of volunteers is becoming increasingly difficult throughout the country, and the HFD is no exception.

***Table 13: Age of Membership Analysis***




Of the members, 64% are under the age of 40. This is the generation that has a greater propensity to leave a position for other opportunities. In addition, this is also the group that will begin to have greater demands on their lives due to work, marriage and children. Thus, an effort needs to be made to ensure that this group feels valued, and the Department understands why they are volunteering.

***Table 14: Years of Service Analysis***




The other concern is that 36% of the department is 50 years and older. This is the group where the physical nature of the job will become more challenging. Also, when they leave the Department, they will be taking with them years of operational history and experience. It is essential that this group works to mentor those that will, one day, assume their leadership roles.

## Recruitment

Advertising for HFD relies heavily on word of mouth. The City has a website in which job postings are provided to the public. It is unsure whether this website is also used to recruit for the Fire Department. The Fire Department page itself does not contain any information about becoming a volunteer or paid Firefighter. In this day, more people are going to be looking at a website for employment opportunities then they would any other type of advertisement.

With the difficulties in finding volunteers, the Department's policy allows no more than three (3) members to live outside of three (3) road miles of the department. It is understood that members have to respond from home/work, but in this day, three (3) road miles is very restrictive. As the Department moves toward paid on premise, this restriction needs to be relaxed to provide for a larger candidate pool.

## Application Process

Recruitment is a critical part of ensuring proper staffing. It is the potential employees' first contact with the Department, so it is an employer's first opportunity to make a positive impression for the applicant. Right or wrong, first impressions can influence decisions. The recruitment process should be easy to follow, transparent and timely. This ensures the applicant has a positive experience, so even if they are not selected, they may be motivated to apply again in the future.

The current Firefighter application is available hardcopy; however, it is not provided on the Department's website. The Department is recommended to develop an application that can be placed on the Department website and submitted to the Department electronically.

After reviewing the current Fire Department application, the application is actually well done and does not have any discriminatory types of questions or solicits illegal information. The consultant might suggest that a section be placed where the applicant can check any type of required licenses or certifications required for the position. This becomes easier for the applicant to ensure that his or her skills and qualifications are listed on the Application.

The application is submitted directly to the Fire Chief, the Fire Chief reviews the application, and contacts the employee for an interview. There was no documentation as to what types of interview questions are asked, or the criteria used to evaluate the individual. The City does approve the hiring of the individual; however, it is not involved in the recruitment or interviewing process.

The Consultants recommend utilizing a structured interview process and ensure all interviewers are trained in interviewing techniques and questioning. The Department should develop a screening tool to review each application consistently to ensure the candidate meets the minimum qualifications, and if so, schedule a formal interview with the Fire Chief. The City has a hiring process for all other departments within the organization. Depending upon the department, the department head will interview the candidate and then make a recommendation to the City Manager for hiring approval. The City Manager reviews the documents and either approves, or does not approve, the hire. The same process should be utilized within the Fire Department, where any recommended candidate by the Fire Chief is also reviewed by the City Manager to ensure that the qualifications of the employee and the position are aligned. This will provide consistency in the hiring process among all City Departments.

### *Applicant Communication*

It should be the responsibility of the Fire Chief, or the City, to notify any applicants of their status. It is recommended all communication to applicants be generated via email, so messages can be sent quickly, and copies retained. This would include communicating a change to the status of their application, if the applicant is not being considered for a posted position and/or will not be moving further in the process after an interview, as examples. This correspondence can be standardized so there is a consistent message being sent from the organization for each scenario. All correspondence should be retained based upon the organization's retention policy.

### *Recruitment Records Custodian*

Currently recruitment documents are collected in the Fire Department. Recruitment records include the documents and actions taken for the hiring of each position such as: job advertisements, resumes, employment applications, interview evaluations, reference checks, results of physical examinations, employment test results, applicant data for candidates not hired, and related information. These records

must be maintained for candidates that are hired as well as for those not hired. These records should be retained and held by the official records custodian for the City for proper retention/destruction. These documents must be kept for three (3) years after a no-hire decision has been made. Records generated for those who become employees must also be retained and should be included in the City's confidential personnel records.

### *Recommendations - Recruitment*

- *Develop an information recruitment pamphlet for distribution and on the website for drop-in applicants.* ***Priority 2***

- *Update the employment application to include a checkoff section for required and/or preferred licenses or certifications.* ***Priority 3***

- *Maintain all application screening processes and documentation.* ***Priority 2***

- *Increase the radius allowed to increase the applicant pool.* ***Priority 2***

- *Develop a standardized rating system to rank candidates during interviews.* ***Priority 2***

- *All personnel who participate in interviews should be trained in interview techniques/legal questioning.* ***Priority 3***

- *All applicant communications should be developed as a template for consistent communication.* ***Priority 3***

- *All applicant communications should be retained.* ***Priority 2***

- *Develop an offer letter template and include a reminder to applicants to authorize a background check in the employment application.* ***Priority 2***

## Job Descriptions

Job descriptions are useful communication tools to explain to employees what tasks an employer expects them to perform. Job descriptions should also address performance standards. Without these tools, employees may not perform as expected. Job descriptions also identify the education, skills, and abilities necessary for a position. Minimum qualifications assist in screening for recruitment and promotional purposes and provide employees with a guide of what will be needed to attain higher ranking positions they may be interested in obtaining in the future.

Job descriptions are also an important part of the application process in which the applicant signs off that he/she is capable of performing the functions of the position. The job descriptions should delineate not only responsibilities, but also operational, management, and leadership skills required for the positions. These job descriptions should be utilized during the hiring and promotional processes.

Within the Department's policy manual is a brief description of the responsibilities of the position. Job descriptions are recommended to be developed or updated for each position in the Department, incorporating their functions, minimum qualifications, and other relevant areas. Job descriptions should not be an instrument that is adopted and placed in the policy or employee manual. Since jobs change, it is difficult to keep them updated without updating the entire manual. If the Department feels it needs to adopt the positions as part of the policy manual, including the position and a brief description is appropriate in the manual. The comprehensive job descriptions should be kept separate.

To keep job descriptions updated, it is recommended that every two (2) years, or when a vacancy arises, the Department review the job description for completeness and note any changes. This way the job description becomes a living document, rather than something that sits on a shelf.

### *Recommendations – Job Descriptions*

- *Develop job descriptions to incorporate the job functions, minimum qualifications, physical requirements, and other relevant areas to describe each position.* ***Priority 2***

## Personnel Policies

Personnel Policy Manuals/Handbooks are a summary of information about an organization that will often include administrative procedures and employment related policies. This document covers basic topics such as expectations of conduct, selection and promotional processes, hours of work, discipline, benefits (if applicable), separation, etc. It also covers standard employment policy topics including harassment, bullying, use of technology, etc. The City does have an employee handbook for all employees; however, it appeared that the Firefighters did not perceive this document also applied to the Fire Department.

There is a difference between a Standard Operating Guideline (SOG) handbook and an employee/volunteer handbook. SOG's or operational policy should be determined by the Fire Department subject matter experts. These guidelines should delineate the operations of the department. The Fire Department and the City should work together so that there are policies relating to all employees, ensuring the inclusion of the Fire Department in the City's employee handbook. Any policies within the Fire Department policy manual that is only applicable to the Fire Department, should remain in the Fire Department policy manual.

An employee handbook provides guidance on the requirements and conduct expected by all members. As such, it should be developed by a human resource subject matter expert, who would recommend policy for the entire Department.

### *Recommendations – Personnel Policies*

- *Coordinate with the City to determine employee related policies and their placement either in a department policy manual, or Employee Handbook.* ***Priority 2***

- *Distribute the Employee Handbook to all members and obtain written acknowledgment of receipt.* ***Priority 2***

## Personnel Records

Personnel records have three (3) major functions in an organization. They provide a memory or recall to administration and employees; they offer documentation of events for use in resolving questions or human resources problems; and they provide data for research, planning, problem solving, and decision-making.

While Federal, State, and local laws require that certain employee information be maintained, certain basic records should also be retained to avoid errors of memory and provide information for making management and human resources decisions.

Contents of personnel files vary by organization, but most human resources professionals accept some practices as standard. The following provides a non-inclusive list of standard items, and where they should be maintained. Note: Some of the items may not be needed in a volunteer department; however, the list has been provided knowing that in the future the Department may be moving to employees.

***Table 15: Personnel Records***

| ***MAIN EMPLOYEE FILE*** |
|---|
| Acknowledgement of Employee Handbook |
| Acknowledgement of policies/policy revisions |
| Application Materials |
| Certifications, licenses, transcripts, etc. |
| Official performance documentation (memos, letters, discipline, recognition, etc.) |
| Offer/promotion/transfer letter(s) |
| Orientation checklist |
| Performance appraisals |
| Status Change documentation (change of address, position etc.) |
| Termination checklist |
| Training requests (with approval and/or denial documentation) |

| ***SEPARATE PAYROLL FILE*** |
|---|
| COBRA and other mandatory benefits notices |
| Direct deposit authorizations |
| Group benefit enrollment forms (health insurance or other forms with medical information must be placed in medical file) |
| Miscellaneous deductions, garnishment orders, etc. |
| New Hire verification |
| Retirement system calculations/benefits |
| W-4 form |

| *SEPARATE MEDICAL FILE – MANDATORY SEPARATION* |
|---|
| FMLA documentation or other medical leave |
| Medical/Psychological pre-employment exams |
| Non-CDL drug and/or alcohol screening (CDL screening mandates its own file) |
| Other medical tests results |
| Sick verification notes |
| Vaccine records and/or declination form |
| Worker's compensation information (doctor reports, letters, etc.) |

| *SUBJECT FILES – MANDATORY SEPARATION OR BEST PRACTICE SEPARATION* |
|---|
| CDL/DOT drug and alcohol tests (maintain together for auditing purposes) |
| Immigration Control Form I-9 (maintain together for auditing purposes) |
| Investigation notes or reports |
| Litigation documents |
| Worker's compensation claims |

It is recommended by the Consultants that all personnel-related documents are maintained with the City record custodian in a secure cabinet. Documents that are not considered to be personnel documents, i.e., training records, can be maintained within the Fire Department.

## *Recommendations – Personnel Records*

- *Ensure all active and inactive personnel files are maintained in secured personnel files, In the appropriate location.* ***Priority 2***

## Facility

The HFD operates out of one fire station located at 110 East Mill Street in the City of Hastings. The station was originally built to house the department of public works in 1955. The Fire Department was moved to the current location, according to staff, in the 1960's. The fire station has three bays which are two (2) deep (apparatus parked behind apparatus) out of the front and one (1) single depth bay adjacent to other bays. The station houses nine (9) pieces of apparatus. The station has a training room, loft storage, office space, locker and shower room, kitchen, and lounge.

There is not an apparent main entrance to the fire station; it appears that most individuals enter through the single apparatus day door and then have to be shown their way through the apparatus floor to get to the training room, offices, restrooms, or lounge area.

***Figure 3: Hastings Fire Station***


## Administrative Area

The administrative offices are connected to the apparatus floor on the North side of the building. It houses a Chief's office, a general office, and an office area in which report entry and daily functions could be entered into a computer. The members appear to take pride in their Fire Department itself; however, the condition and age of the station does not meet the current needs of the Department and members are exposed to potential health dangers such as carcinogens from apparatus exhaust fumes. Inadequate ventilation of those exhaust fumes violates EPA standards.

***Figure 4: Station Administrative Area***

## Training Room

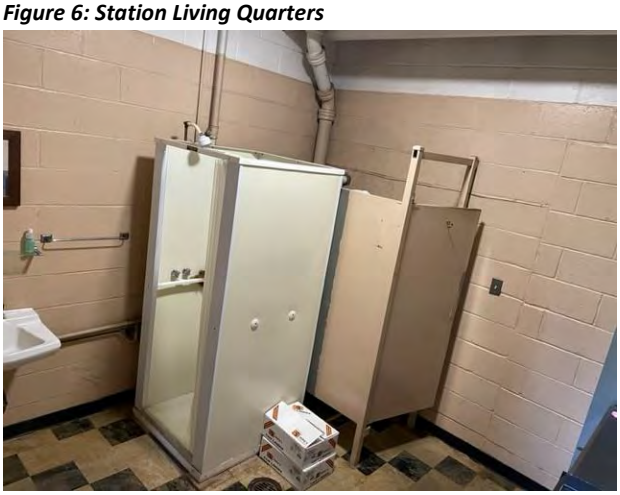
The members take pride in the training room and use it regularly, as historical department mementos are hung on the walls for everyone to recognize. The training room is quite small and does not provide adequate space for the current demands of a training room such as computers, books, and overhead projection. The room is connected to the apparatus bay and does not have the proper ventilation to keep occupants safe from the carcinogenic fumes in the apparatus bay. The training room should be a clean, well-lit area with enough space to hold not only Department training but also community classes as well, such as CPR training.

***Figure 5: Station Training Area***

## Living Quarters

The living areas within the station include a lounge with television, a kitchen, and a make-shift locker/shower/locker room, which is insufficient for current standards. There are no separate washroom and shower facilities for men and women. These spaces are again attached to the apparatus bay floor and expose employees to the carcinogenic fumes from the apparatus bay. The kitchen is dated, and the lounge is old and uncomfortable. A complete refurbishment of these areas is needed to meet current standards.

***Figure 6: Station Living Quarters***

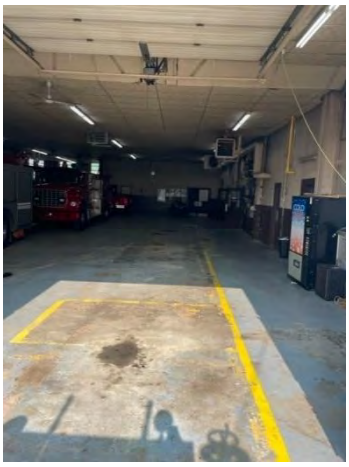


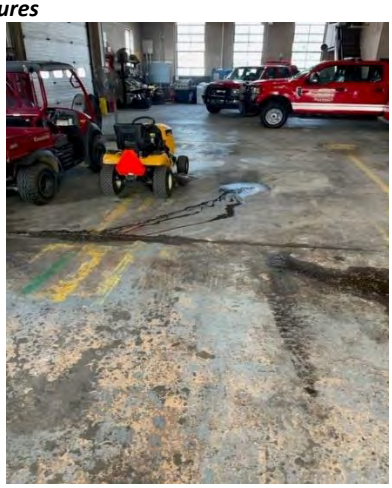
## Apparatus Bay Floor

The apparatus bay floor is large and congested. The floor does not have slip resistant coating. There is not a sufficient exhaust removal system. Research from members suggested an effort to have a sufficient system in place was made but the company who supplied the system severely underestimated the size of the system and then went out of business. The current system exhausts through four ventilation fans in the corners of the apparatus bay. The fresh air intake is located in the middle of exhaust fans causing the possibility of bringing contaminants back in the station after removal.

There is a hose tower, used for drying hose. The ladder in the hose tower was equipped with fall protection. There is also an air cascade system (County-owned) in the back of the station, per the full-time employee it is current on-air testing regulations.

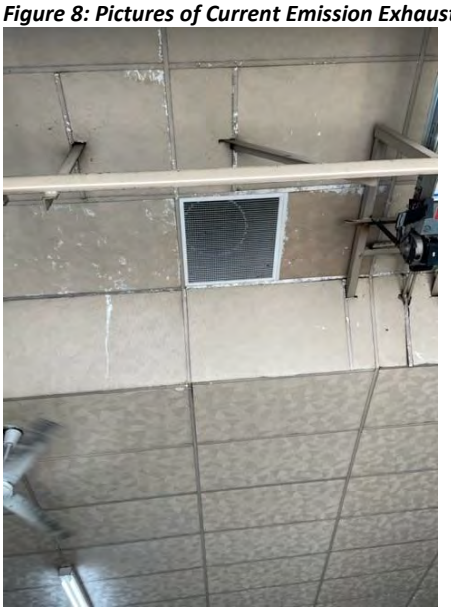
***Figure 7: Series of Apparatus Bay Pictures***





## *Ventilation System*

***Figure 8: Pictures of Current Emission Exhaust***



*Depicts one of the exhaust fans.*

*Depicts the only "fresh air" fan.*

## Engine Emission Exhaust

Emission exhaust is a serious concern for Fire/EMS personnel. Conventional wisdom suggests that rather than releasing harmful emissions into the environment and then attempting to remove them to a safe level would not be as beneficial as capturing the emissions from the source and removing them. NFPA 1500 - Standard on Fire Department Occupational Safety and Health Program – Annex A – A.10.1.5 – 2021 edition requires that apparatus emission exhaust must be limited to the lowest feasible concentration, according to NIOSH and OSHA.

Capturing the carcinogens at the source and not releasing them into the environment where firefighters are working is more prudent than putting carcinogens into the environment and then trying to exhaust them.

Historically, the Fire/EMS industry has recognized three (3) Emission Exhaust removal methods:

1. **Direct-source Capture System:** Filtration hoses attach directly to the exhaust of the apparatus and break away once the vehicle leaves the facility. The benefit of this system is that the engine emission exhaust never enters the station. The attachment hoses are ceiling-mounted and run on a straight track, which disengages once the vehicle leaves the station. The hoses hanging next to the apparatus are a visual reminder to station personnel of the hazards of diesel engine emissions.

2. **Direct-source Capture System (vehicle-mounted filtration):** This system consists of a specialized filter and diverter that are mechanically installed alongside the vehicle's exhaust system. The

system uses an electronic control device that automatically diverts the vehicle's exhaust flow from its normal path and through the filter after the vehicle starts. This cycle time can be adjusted — anywhere between 10 and 99 seconds — to allow sufficient time for the vehicle to safely leave the station. Once the set time has elapsed, the diverter re-routes the exhaust stream from the filter and back to its normal route through the muffler and out the exhaust pipe.

3. **Space Filtration System:** These systems exchange the air in the apparatus bays by pulling particulates and gases through a series of filters. Systems are traditionally mounted on the ceiling. The systems activate by units measuring the amount of dangerous particles or by sensors, which activate when the vehicle(s) move. The biggest drawback of these systems is that dangerous engine emission exhaust is released into the station environment and then the system attempts to remove them.
   *Source: FireRescue1 The Choice: 2 Systems to Remove Engine Exhaust*

At least thirty-seven states have expanded access to workers' compensation or other disability-related benefits for Firefighters by statutorily creating a disability presumption for Firefighters who contract certain types of cancer while performing his or her firefighting duties.

Michigan has passed what is presumptive legislation and has been signed into law where it is assumed that the effects of working as a Firefighter in the State of Michigan may have detrimental effects on the health of Firefighters. Working within toxic environments may add to the causation of certain illnesses and cancers which could be covered in the legislation, adding liability to the City of Hastings.

In 2013 OSHA released a "Hazard Alert Warning" for diesel/exhaust/diesel particulate matter, identifying the short- and long-term effects from high concentration to diesel exhaust. Aside from the short-term effects which may include headache, dizziness, and irritation of the eye, nose, throat, long term exposure may lead to medical issues involving areas such as cardiovascular, cardiopulmonary, and respiratory disease and lung cancer. This alert was released to identify the prolonged diesel exhaust and PPM exposure as increasing the risks. The report does not provide suggestions as to how exposures to such toxins can be controlled. Engineering controls are the most effective strategy for minimizing exposure to exhaust and particulate. A combination of controls is often required. Examples include:

- *Performing routine preventative maintenance of diesel engines to minimize emissions,*
- *Installing engine exhaust filters,*
- *Installing cleaner burning engines,*
- *Installing diesel oxidation catalysts,*
- *Using of special fuel additives,*
- *Providing equipment cabs with filtered air,*
- *Installing auxiliary ventilation systems such as tail pipe or stack exhaust vents to capture and remove emissions.*

The Consultants feel this lack of an adequate exhaust/fume emissions removal system must be addressed for the safety of everyone. Additionally, the Consultants are not OSHA inspectors, it is recommended that HFD refer to OSHA publications to ensure proper compliance within all areas of the Fire Department.

### *Recommendation – Emission Exhaust*

- *The City should install an emission exhaust system that meets the NFPA 1500– Annex A requirements. Air scrubbers might be considered to capture exhaust from small power equipment that might be started in the station.* ***Priority 1***

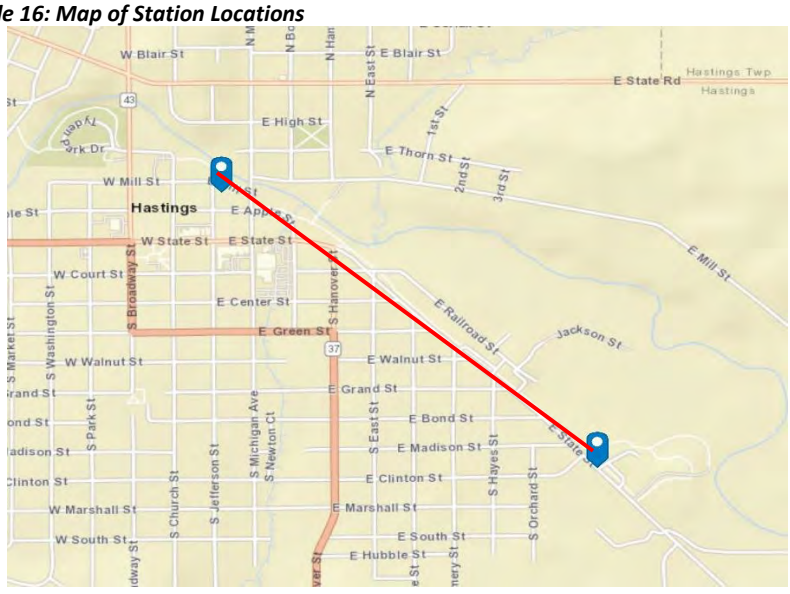
## Renovate or Build New

This topic is sure to generate copious opinions as the to the best way to replace the existing fire station that is outdated and does not meet the industry standards of NFPA, OSHA, or American With Disabilities Act (ADA) that will be mandatory in the renovation or building a new facility. In either case a major improvement in the fire facility will also offer an opportunity to support the overwhelming pride in the Fire Department that Hastings members have.

The City will need to determine if renovating the current facility is feasible or building a new facility at the same location or a different location. Unfortunately, the driving factor is solely the cost. There are however the following factors to consider when locating a fire station:

- ***Response Time:*** *Whether the station is maintained at its current location or moved to a potential new site; consideration in paid-on-call departments such as Hastings must give the ability of the member to respond to the station in a safe and timely manner. Does the relocation of the facility improve or worsen the majority of the members to respond to the station?*

***Table 16: Map of Station Locations***




Existing Station: 110 E. Mill St.
Potential Site: 1037 E. State St.
Distance: 0.93 miles
Drive Time: 2 minutes

- ***Potential Response Delays:*** *Are the geographics of the areas under consideration impacted negatively by limited access to roadways, railroad crossings, increased traffic congestions, school zones, and/or inability to meet the current compliance to NFPA 1720 standard.*

- ***Future Service Needs:*** *Future service needs are linked predominantly to future growth in population, mercantile/industry growth, and transportation infrastructure within the protection area. Information advantageous to determining future service needs includes but is not limited to zoning maps, land use maps, urban design documents, municipal and County master plans, area social economics, environmental issues, etc.*

- ***Functionality and Purpose of the Facility:*** *Some communities build Fire/EMS facilities in conjunction with other municipal needs. Although this is often a practical approach to addressing multiple community needs, there are certain aspects of Fire/EMS facilities that need to be isolated from the general public, including parking to ensure the safety of civilian vehicles, and rapid and safe access to the facility by paid-on-call members around the movement of emergency apparatus.*

- ***Citizen Perception****: Moving a fire station can be a very traumatic occurrence within a community. If an existing fire station is moved further from "my residence," the perception is "my protection" has diminished; whereas, if the fire station is moved closer to "my residence," the perception is "my protection" has improved. Everyone wants a fire station near them; however, no one wants a fire station next door or across the street from them. Perhaps the best description from a City administrator who went through the process of moving a fire station was, "If we could anesthetize all the citizens, we could consider relocation of the other facility." This statement underscores the emotions that can be encountered when relocating a fire station.*

- ***Cost:*** *Every community strives to be cost effective when it comes to spending taxpayers' dollars. However, it cannot be overlooked that the term cost-effective has two parts:* ***cost*** *being the dollars needed to provide the service, and* ***effective*** *being the ability to provide the proper level of response and services. Both parts are critically important when projecting future levels of emergency service protection, and neither part may override the other.*

## Future Facility

Whether renovation or building new is chosen the Consultants recommend:

- *4 bay drive thru facility; each bay should be 20 feet wide and 100 feet in length.*
- *Drive-thru Bay requires ample turning radius in the rear of the station and designed not to allow parking of private vehicles in this area. The design of this area should be based on the widest turning radius of current or known future apparatus.*
- *The apparatus floor should have trench drains adequate in length to handle excess water on the floor. A trench drain should be under all apparatus with a slight floor pitch towards the drain.*
- *One bay (rear) should be designated as a maintenance bay and the floor drain should be to the side near the exterior wall. The floor of this bay should have a slight pitch towards the drain.*
- *The minimum bay door size should be 14 feet wide by 14 feet high.*

- *There should be two service doors at each end of the apparatus floor.*
- *Exhaust emission removal system – no less than **100% effective captures.***
- *Storage:*
    - *Records*
    - *General*
    - *Kitchen pantry storage*
    - *Hose, SCBA, EMS, etc.*
    - *EMS supplies must be kept in a clean dry locked area*
- *Air compression – filling SCBA bottles – air intake from outside of building.*
- *OSHA approved SCBA safety containment filling station – class 2.*
- *Six offices – one with a small conference room: e.g.,*
    - *Fire Chief*
    - *Assistant Chief*
    - *Shift Commander*
    - *Shared general office*
    - *Training Officer*
    - *Fire Marshal*
- *Two restrooms proximal to offices one male, one female.*
- *Personnel protective clothing storage should be raised off the apparatus floor for cleaning and allow airflow for drying purposes. Each storage area should be a minimum of seven square feet.*
- *General public reception area minimum 12 x 15 with a countertop and desk for office personnel to meet civilians entering the building.*
- *Public restrooms – one male, one female – both handicapped accessible directly off the public reception area.*
- *Secretary(ies) work area with ample filing cabinets.*
- *Gender inclusive having equal facilities for both genders. Personnel restrooms locker area – one male and one female:*
    - *Shower facility*
    - *Enough sinks and toilets projecting the number of staff for 30 years in the future*
    - *Attaching locker room to the shower area for each sex with ample lockers for all employees*
- *Exercise room with equipment.*
- *Study/library/quiet area room.*
- *Kitchen for up to ten assigned personnel.*
- *The kitchen should be equipped with commercial appliances (multiple refrigerators).*
- *Eating area – adjacent to kitchen for ten personnel.*
- *Lounge/dayroom –includes television, chairs, phone, etc. for up to ten personnel.*
- *Future sleeping/bunk room –minimum of eight beds – 5 foot dividing wall between beds and front entrance – each bed area includes minimum storage for personal belongings.*

- *Officer's bunk – room isolated from general bunk area with small desk and work area –includes minimum storage for personal belongings.*
- *Training room. The room design should have removable tables and chairs to accommodate a minimum of 30 individuals. The classroom should be equipped with a computer, LCD projector ceiling mount, chalk and whiteboards, smart board, and easels for flipchart paper.*
- *Alarm alerting system and intercom throughout the station.*
- *External emergency phone for citizens if personnel are out of the station.*
- *Entire building must comply with the Americans with Disabilities Act.*
- *Station should have a set back from the street of a minimum of 45 feet so apparatus can be pulled out for maintenance and daily apparatus checks.*
- *Public parking and assigned employee parking should not interfere with egress of emergency apparatus.*
- *Building material should be durable and easy to maintain.*
- *Station should have a complete fire suppression sprinkler and fire alarm system.*
- *Natural gas emergency generator that powers a minimum of 100% of the station. Automatic start and weekly check feature with a manual override feature.*
- *Keyless entry pads for station doors – self-locking all external doors.*

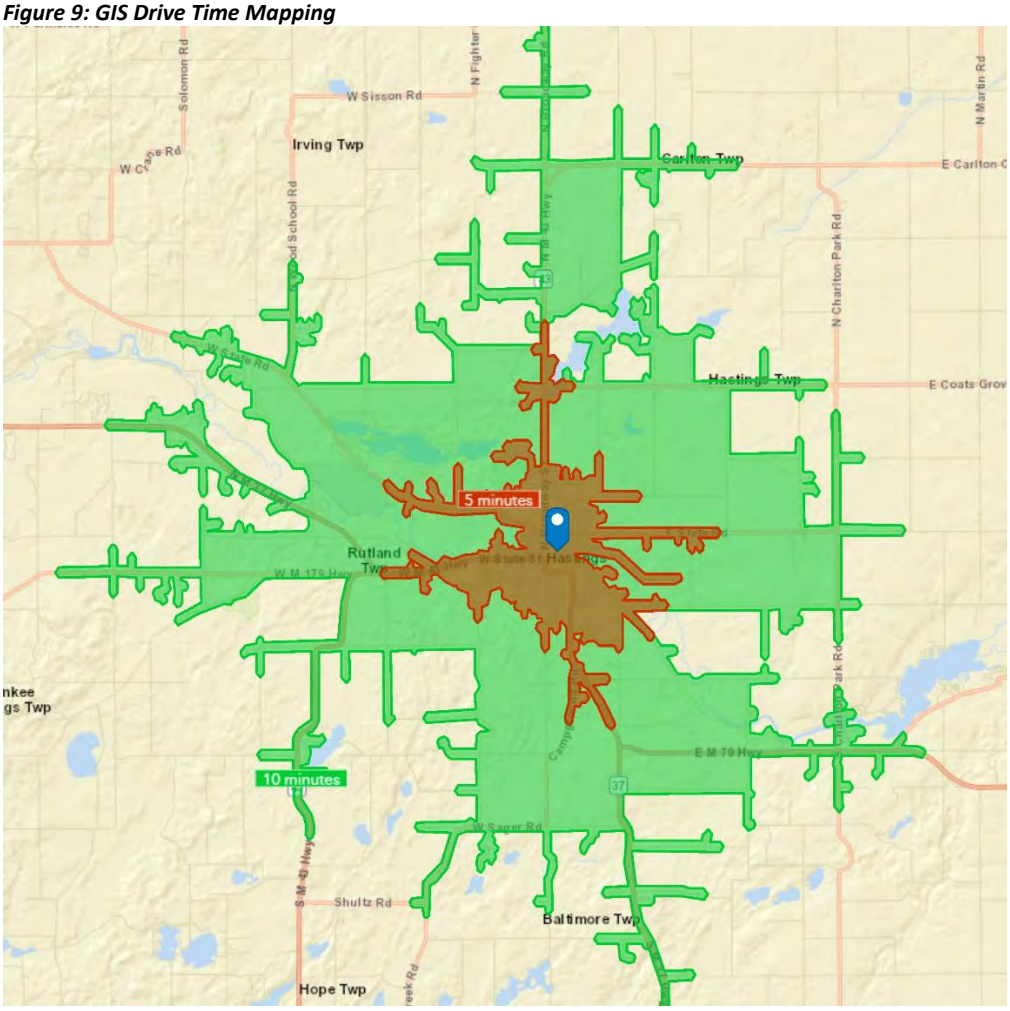
### *Recommendation – Replace Existing Fire Station*

- *The Consultants recommend a new facility encompassing all of the facility components listed above to replace the existing fire facility.* ***Priority 2***

## GIS Mapping

The Consultants have generated a GIS map illustrating drive times from the existing station location (inconsequential drive time change from new location) as illustrated below:

***Figure 9: GIS Drive Time Mapping***




**Brown Area**: represents a five (5) minute drive time under normal road and weather conditions.
**Green Area:** represents a ten (10) minute drive time under normal road and weather conditions.

## Apparatus

The Consultants assessed the Hastings apparatus to observe its overall condition, sufficiency of equipment carried, pumping capacity, water carried, mileage, engine hours, and cleanliness. A community must have functional, operational, and dependable apparatus capable of responding to emergencies at any time and in a variety of weather conditions. The balance of how much apparatus a community needs is determined by community risks, service area size, staffing methodology, demographics, social-economics, structure condition and age, and fiscal capability of the community.

At the time of the study the HFD rolling stock (apparatus/vehicles) consists of ten (10) pieces. The Consultant's impression after the review was there should be serious concerns about the age and condition of some of the apparatus. Acknowledging that NFPA 1901 – Standard for Automotive Fire Apparatus is not mandatory; however, it can often act as a double-edged sword – you are not required to meet the standard, but, upon the death or serious injury of a Firefighter, you could be held accountable for not meeting the non-mandatory standards.

The Department stock includes 3 engines, 2 brush trucks, 1 tender, 1 ladder truck, 1 Squad/engine, 1 rescue unit, and 1 Chief vehicle as illustrated in the table below:

***Table 17: Hastings FD Apparatus***

| ID # | Year | Make | Type | Pump/GPM | Tank/Gal | Mileage | Hours | Owner |
|---|---|---|---|---|---|---|---|---|
| 831 | 1993 | Spartan | Engine | Hale, 1,250 | 1,000 | 38,302 | | Birch |
| 832 | 1999 | Freightliner | Engine | Hale, 1,750 | 1,000 | 22,791 | 2,141 | Birch |
| 833 | 2018 | Ford F350 | Brush | unknown | 200 | 3,928 | | Birch |
| 8331 | 2002 | Chevrolet 2500HD | Brush | unknown | 200 | 13,441 | | Birch |
| 834 | 1986 | Ford | Tender | Hale 450 | 1,200 | 31,936 | | Birch |
| 835 | 2022 | Ford F250 | Chief Car | N/A | N/A | 13,644 | | Birch |
| 836 | 2000 | Sutphin | Ladder Truck | 2,000 | 300 | 9,374 | 1,537 | City |
| 837 | 1997 | International DT | Squad/Engine | Hale 500 | 500 | 29,269 | | Birch |
| 8371 | 2003 | Ford Type III FD-160 | Rescue | N/A | N/A | 13,644 | | Birch |
| 838 | 1991 | Ford L9000 | Engine | Hale 1,500 | 1,250 | 14,076 | | City |

Most Fire Department members believe the apparatus is old and needs serious repairs or replacement. Today's apparatus are highly technical pieces of equipment inasmuch as apparatus is the basic fire service tool.

## Apparatus Maintenance

The Consultants requested a copy of maintenance records including vehicle check forms, service tickets, and inspection records, but none were provided or could be found. Although the Department's full-time Driver conducts the daily apparatus checks for the department every morning, there is not a formal vehicle

check program available that references NFPA 1911 – Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles.

Records and documentation are critical for HFD, and State and Federal agencies will conduct investigations and most likely seize all records pertaining to the apparatus and qualifications of the operator of that apparatus. Therefore, it is essential that a fully accurate, well-kept, and consistent record for the life of all apparatus, its tools and equipment are kept for each vehicle. This includes all vehicles operated by the HFD. The following are items that should be included in the documentation.

- *Diagnostics*
- *Problem found with apparatus*
- *Mechanic or Mechanic's names and business name if a contractor*
- *Mechanic's qualifications*
- *Parts needed.*
- *Cost of parts & where procured.*
- *Time of repairs*
- *All annual testing and all associated material such as the detailed findings of the testing report e.g.,*
    - *Ground ladders testing*
    - *Pump testing*
    - *Hose testing*
- *Repair records for small tools, power equipment, identify the receiving apparatus.*
- *All preventative maintenance and its schedule*
- *For any work, small or large, done at a contracted shop the information still must be included in the vehicles permanent file.*
- *All records must be kept up to date.*

## *Recommendation – Apparatus Maintenance*

- *It is essential for the leadership of the Fire Department to maintain accurate up to date apparatus maintenance records for the life of the apparatus.* ***Priority 1***

The driver stated every morning he comes in and starts every vehicle and lets them run for an unspecified time (unknown if this occurs on his days off, by someone else, or weekends). He said this is necessary because the air tanks drain from the vehicles overnight because there is not an air system piped in the station to keep the apparatus air tanks full. When the air tank is empty on an apparatus, the engine needs to run several minutes to build up pressure causing delay in emergency response. Therefore, all apparatus is started and allowed to run in the station for a period of approximately 20 minutes (see emission exhaust section).

## *Recommendation – Maintain Apparatus Air Pressure*

- *The Fire Station needs to be equipped with an air compressor and storage tank, which is piped to each apparatus that needs a certain level of air pressure to allow it to move.* ***Priority 1***

## Odometers vs. Engine Hour Meters

An hour meter is a gauge or instrument that tracks and records the overall elapsed time that the engine is actually running and is normally displayed in hours and tenths of hours. The table "Apparatus/Vehicle Inventory" lists the apparatus/vehicles that have both odometers and engine hour meters.

The majority of hour meters are used to log running time of equipment to assure proper maintenance of expensive machines or systems. This maintenance typically involves replacing, changing, or checking parts, belts, filters, oil, lubrication or running condition in engines, motors, blowers, and fans, to name a few.

Fire trucks, ambulances, and police cars may all have significantly higher running times compared to mileage. Fire trucks can be running for hours at the scene without clocking a single mile. If maintenance is performed on these vehicles based on odometer readings only, engine life may be affected. Maintenance personnel understand the wear issues surrounding a vehicle's engine hour time compared to road miles; and therefore, Board Members should not base replacement needs on apparatus/vehicle appearance and mileage but consider all factors including engine hours.

### *Recommendation – Engine Hour Meters*

- *All new or renovated apparatus should be equipped with engine hour meters.* ***Priority 2***

## Apparatus Condition

Overall, the Consultants found that the larger apparatus is aged and lacking the safety mechanisms found in modern fire apparatus such as seatbelt warning, rollover protection, airbags, etc., The smaller vehicles such as the brush trucks were in better condition. There are two (2) agencies that have lists of what they consider to be "needed equipment." See the Insurance Service Office 2013 Fire Suppression Rating Schedule, and the NFPA 1901 (2016 Edition) Appendix **B**. The apparatus appeared to carry an abundance of tools necessary to be an effective firefighting unit but, adherence to standards in NFPA and ISO need to be adhered to.

## Sufficiency of Apparatus

Sufficiency of apparatus can be considered in two (2) divergent ways: 1) the ***amount*** of apparatus, and 2) its ***capability***. It appears to the Consultants that the amount and type of apparatus and equipment for the HFD is excessive.

The Consultants referenced The ISO Summary report for the HFD Effective March 1, 2021. The report identifies a minimum needed flow (GPM) at select locations in the service area of up to 3,500 GPM. Our recommendation will require that flow be met.

## Apparatus Replacement

Fire apparatus, like all mechanical devices, have a finite life. How long that life may be depends on many factors such as the aforementioned topics of engine hours, mileage, the quality of the preventive maintenance programs, technology advancements, quality of a driver training program, rule (policy) enforcement, quality of the original builder, availability of parts, custom or commercial chassis, and the ability of the department to facilitate funding.

As noted above, determining when a piece of apparatus needs replacement must be based on more than appearance and should include:

- *Usage*
- *Preventative maintenance*
- *Engine hours*
- *Milage*
- *Technology advancements*
- *Condition*
- *Driver training and enforcement*
- *Fiscal capability of the municipality*

Another significant factor in equipment replacement as outlined in the NFPA Standard, is the rapidly changing area of technology, much of which is directly related to Firefighter safety. Based on this factor, apparatus technology becomes an issue when considering replacement. The Consultants note that a department like HFD with limited resources, training deficits, and inexperience driving large apparatus, could greatly reduce risk by investing in new fire apparatus.

Over the years, the NFPA has attempted to define life expectancy of apparatus with little success. The 2016 edition of NFPA 1901 recommends Fire Departments evaluate whether to retain fire apparatus in first-line service for more than 15 years as a result of safety considerations.

> *Annex D, titled Guidelines for First Line and Reserve Fire Apparatus due to changes in NFPA 1901, especially relating to safety, Fire Departments should seriously consider keeping fire apparatus more than 15 years in first-line service. It is recommended that apparatus more than 15 years old that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912 Standards for Fire Apparatus Refurbishing; and incorporate as many features as possible of the current fire apparatus standard (section D.3). Apparatus that was not manufactured to the applicable NFPA fire apparatus standard or that are over 25 years old should be replaced.*

Although the Consultants understand the argument that NFPA standards are one-size-fits-all, meaning that HFD apparatus could be compared to a large career municipal department; such is not the case. The

25-year mark has everything to do with the safety of the Firefighters. The safety innovations in fire apparatus have significantly improved in the past 25 years.

With that said, the Consultants completely agree with the retirement of apparatus after 25 years unless, it meets the *NFPA 1912 Standards for Fire Apparatus Refurbishing* and incorporates as many features as possible of the current fire apparatus standard (section D.3).

> *NFPA 1912 (section D.3.) apparatus that was not manufactured to the applicable NFPA fire apparatus standard or that are over 25 years old should be replaced. The table below illustrates the current HFD that exceeds 25 years:*

***Table 18: Apparatus Exceeding 25 Years Age***

| ID # | Year | Make | Type | Exceeds by |
|---|---|---|---|---|
| 831 | 1993 | Spartan | Engine | 5 years |
| 834 | 1986 | Ford | Tender | 12 years |
| 837 | 1997 | International DT | Squad/Engine | 1 year |
| 838 | 1991 | Ford L9000 | Engine | 7 years |

## Recommendation Sufficiency of Apparatus

The Consultants recommend that the future apparatus for the HFD should consist of:

- 1 – Engine: Minimum pump size of 1,750 GPM & 1,000 gallons water tank
- 1 – Pump/Squad: Minimum pump size of 1,500 GPM & 750 gallons water tank
- 1 – Tender: Minimum pump size of 500 GPM & 2,000 gallons water tank
- 2 – Brush Trucks: Minimum pump size of 200 GPM & 250 gallons water tank
- 1 – Arial Platform/Ladder: Minimum pump size 1,500 GPM & 95 to 100-foot main ladder
- 1 – EMS Rapid Response Vehicle for MFR incidents
- 1 – Chief's Vehicle
- 8 – Total

To accomplish this recommendation, the Consultants understand that it is cost prohibitive to replace/renovate/purchase new apparatus immediately, rather, this recommendation should be the strategic plan for replacement within five (5) years.

### *Recommendation 8371 Rescue Vehicle*

The existing 8371 should be removed from the Fire Department's inventory due to its age and condition, and replaced with a Rapid Response Vehicle, the primary purpose of which is to respond to EMS incidents as illustrated in the figure below:

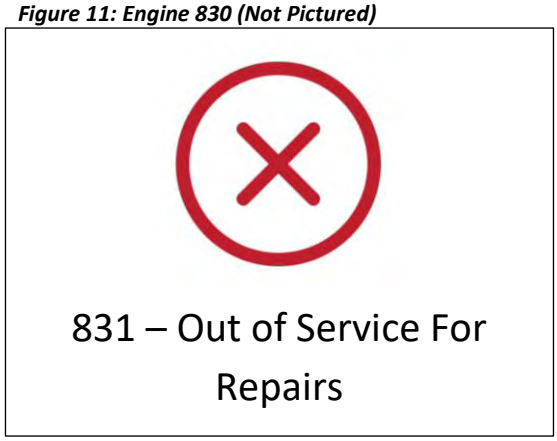
*Figure 10: Unit 8371*


*EMS Rapid Response Vehicle*


## *Recommendation – 831 – Engine*

Engine 831 was in the repair shop when the Consultants conducted the site visit. Engine 831 is a 1993 Spartan with a 1,250 GPM pump and 1,000-gallon water tank. The engine is 30 years old, and it is doubtful that it could meet the requirements of NFPA 1912 if refurbished. This vehicle should be removed from the Fire Department inventory and replaced with an engine with a minimum pump size of 1,750 GPM & 1,000-gallon water tank.

*Figure 11: Engine 830 (Not Pictured)*





## *Recommendation – 836 Ladder Truck*

The purchase of a new aerial fire apparatus involves a major investment and should be treated as such. Currently, the ladder truck is out of service with a number of issues. The concern with this unit is the lack of testing documentation of both ladder and pump. The Consultants were informed by a senior member that they didn't believe the ladders had ever been third-party tested.

The ladder truck is 23 years old and could have continued use if it were brought up to NFPA 1912. The Fire Chief indicated that if a ladder truck were needed while 836 was out of service, they would need to call the Yankee Springs Fire Department which he predicted a 30-minute response time.

An obvious question would be: does the HFD need aerial apparatus? Many individuals solely base the need for aerial apparatus being building heights, overlooking the primary purpose of aerial apparatus of rescue, ventilation, and exterior firefighting. Deployment of ground ladders for rescue purposes from a two (2) or more-story building takes a minimum of three (3) Firefighters where a ladder truck can be operated by one (1) Firefighter. The Consultants believe aerial apparatus is appropriate for the HFD.

When 836 is replaced, it should be replaced with an aerial platform truck as illustrated in the figure below.

***Figure 12: 836 Ladder Truck***

***Aerial Platform***

## *Recommendation – 834 Tender*

Tender 834 is 37 years old and should be removed from the Fire Department inventory when a replacement can be purchased. A tender is an important piece of apparatus needed in the HFD, however, the safety advancements in 37 years with tenders have been significant from breaking, turning stability, and water truck baffles.

> *The liquid in a tender tank will naturally begin to move around whenever the tank itself is in motion. This motion is called "surge". It creates multiple safety hazards and puts additional wear and tear on your vehicle. Tank baffles reduce water surge by creating obstacles inside the tank that break up flows as they form.*

***Figure 13: 834 Tender***

***Tender with Large Tank and Pump***


## *Recommendation – 832 Rescue Pumper*

Although this unit is 24 years old, its condition is good and renovation to NFPA 1912 should be considered in the future; however, this apparatus should remain in service. When this apparatus is replaced, it should be with a Pumper/Squad.

***Figure 14: 832 Rescue Pumper***


***Pumper/Squad with Crew Cab***


## *Recommendation – 838 – Engine*

Engine 838 is City owned and is a 1991 Ford L9000 with a 1,500-gallon pump and 1,250 tank. This unit is in very poor condition and 32 years old. It would not be cost-effective to attempt to bring this unit up to the NFPA 1912 standards.

***Figure 15: 838 Engine***


Remove From FD Inventory

## *Recommendation – 837 Squad/Engine*

Squad/Engine is owned by the District and is a 1997 International with a 550 GPM pump and 300 gallon water tank. This vehicle is 26 years old and in very poor condition. It would not be cost-effective to attempt to bring this unit up to the NFPA 1912 standards.

***Figure 16: 837 - Engine***


Remove From FD Inventory

## *Recommendation – 8331 Brush Truck*

Brush truck 8331, although 21 years old, is in good condition and should remain in the Fire Department's inventory. It is owned by the District and carries a 200 gallon water tank. When 8331 is replaced, it should be with a 4-wheel off-road vehicle with a 200 GPM pump and water tank of 250 gallons.

***Figure 17: 8331 - Brush Truck***

## *Recommendation – Not Pictured*

- *835 – Chiefs Car is a 2022 Ford F250 with 13,644 miles – should be replaced when needed, currently in good condition.*

- *833 – Brush Truck is a 2019 Ford F350 with a pump and 200-gallon water tank.*

## Recommended Future Replacement Plan

The table below illustrates the recommended future replacement of vehicles:

***Table 19: Recommended Future Replacement Schedule***

| Type | Service Life | Replacement |
|---|---|---|
| Engine | 20 Years | 3 years reserve |
| Truck | 20 Years | 5 years reserve |
| EMS | 10 years | Remount once |
| Tenders | 20 Years | 3 years reserve |
| Brush | 15 years | 3 years reserve |
| Cars | As Needed | |

### EMS Vehicle Remount

Remounting is an excellent, environmentally responsible, and economical solution. Remounting an existing EMS vehicle patient care compartment on a new vehicle chassis is less expensive and often faster than building a new vehicle from scratch, making it an attractive upgrade path for many agencies. The remount process has been used more frequently in the past ten (10) years. The primary benefit of the EMS vehicle remount route is its financial advantage; during the remount process, the existing patient compartment is stripped down and refurbished, the remounted compartment is placed on a new chassis and is titled as a new unit.

# Training

The foundation of any successful emergency operation is directly linked to the training of its members who provide Fire/EMS services. It is a common belief in the fire service by many experts, that no single activity in a fire department is as important as their training and preparedness. How individuals train, how often they train, and the quality of such training is directly reflected in the way a Firefighter performs during very emotional and physical emergency situations and conditions.

The importance of *training* and its *documentation* cannot be overstated. Firefighting and Emergency Medical Services (EMS) work is at times a demanding and a potentially dangerous job. Training is often considered the backbone of the Fire Department; it produces a well-prepared force that through repetition increases the speed of an operation and enhances proper execution while reducing injuries. The Consultants emphasize that ***documentation*** of actual training is as important as the training itself.

Prior to the Consultants conducting their on-site visit, a request for complete Department data was requested (Appendix A) from the Fire Department. This data is generally reviewed prior to the Consultant's visit to provide an initial understanding of your Department and its operations. Department training records are an important aspect of this request to enable the Consultants to review the current and past three years of records and practices as they relate to Department training. It was understood that a changeover in Fire Department data management systems had occurred in 2020 and is addressed within this report. This resulted in very limited and incomplete data being provided and, in some cases, non-existent, making it quite difficult for research of historical data.

Upon meeting with the Interim Fire Chief, the Consultants were further advised that Fire Department recordkeeping and documentation as it relates to training has been lacking historically and needs updating to comply with current industry standards. The number of training hours offered to its members amounts to approximately four (4) hours per month on two (2) various training topics delivered on the first and third Wednesday evenings, or the first and third Thursday mornings. The Consultants were advised that each of the training sessions routinely last approximately two (2) to three (3) hours in length, but that each session begins with the "business meeting" of the Hastings Volunteer Firefighters Association. This fundraising/fraternal arm of the Fire Department conducts the general business of the association prior to conducting the training. In reviewing provided minutes of such business meetings, it reflected a three-hour (6:30-9:30) timeframe for both the business meeting and the Department training collectively. Ultimately following data review and discussions with the Chief, the maximum number of hours provided to each member on an annual basis is 48 hours. The Chief further advised that there is no actual monthly or annual training schedule posted, but that the training topics were selected through the members requests submitted to the Chief.

## *Recommendation – Training Record Quality Assurance Program*

- *The Department should develop and implement a training record quality assurance program aimed at reviewing training sheets/records to ensure that the necessary information is provided*

*to properly record training for individuals and the Department. Members showing deficiencies in submitting records should be addressed.* ***Priority 2***

The Chief discussed with the Consultants that the HFD's current level of training (offering two topics per month delivered through four sessions per month-even adding an occasional Saturday special training session), that such standards could not be met on an annual basis by the HFD. Their current training plan is to *attempt* to meet as many NFPA/ISO Firefighter standards over a three (3)-year period as possible. This does fall far short of industry recommended standards. Consideration of increasing the number of training nights as well as *training* for the full three (3) hours per training session would be a helpful improvement.

Additionally, it was found that the attendance/payroll roster sheet signed by each member attending the business meeting/training session was the sole record for each training session. The training data provided was very minimal pertaining to training records for each individual member and the Department does not maintain a separate training folder/file for each member. The Department does not require any detailed documentation/signoff sheets outlining each training topic of instruction or standards to be met by those being trained. Further, there is no provision for requiring signatures of the instructor(s) and/or member participants involved in training to assure successful competency of the subject matter. The HFD does have two State of Michigan certified Fire Instructors within their membership who would generally conduct/oversee Departmental training sessions according to the Chief.

The table below outlines the individual member hours for the year 2022 and the year-to-date (YTD) hours for the first five (5) months of 2023. The Consultants were not provided with data for the years 2020-2021.

***Table 20: Hastings Members Training Hours***

| ***Training Hours Per Member Hastings Fire Department*** | | |
|---|---|---|
| **Member** | **2022 Hours** | **2023 Hours (Jan-May)** |
| 1 | 48 | 30 |
| 2 | 48 | 30 |
| 3 | 4 | 15 |
| 4 | 45 | 15 |
| 5 | 45 | 25 |
| 6 | 45 | 25 |
| 7 | 30 | 20 |
| 8 | 3 | 4 |
| 9 | 25 | 15 |
| 10 | 45 | 30 |
| 11 | 15 | 12 |
| 12 | 20 | 15 |

| *Training Hours Per Member Hastings Fire Department* | | |
|---|---|---|
| **Member** | **2022 Hours** | **2023 Hours (Jan-May)** |
| 13 | 37 | 25 |
| 14 | 6 | 25 |

***Note***: For training year 2022 the average number of hours attained was 29.5 hours per member for the year. The year 2022 was the only year in which the Consultants received a full year's training hours.

With no monthly, annual, or multi-year training plan currently in place by the HFD, it is difficult to realistically attempt to cover the ISO/NFPA recommended training topics or competencies. By developing such a training plan, it would allow the Department to scope out an effective training agenda for its members to cover the necessary/required topics of training over an extended period. Even if/when a formal training plan might be developed, consistency of delivery and performance would be difficult to achieve without having someone designated to provide oversite in providing training to all personnel.

## *Recommendation – Training Plan*

- *The Fire Department should develop a consistent monthly-multi-year training plan to address the various training needs of the Department; prioritize the needs and develop the capacity and resources to properly address the training needs.* ***Priority 3***

## *Recommendation ISO/NFPA Training Standards*

- *The ISO/NFPA and other related standards should serve as a reference point and benchmark for quality and consistent training hours in developing a training program for the HFD. Due consideration should also be given to the Standards: NFPA-1002 (standards for professional firefighter qualifications), NFPA 1002 (Standards for Apparatus Driver Operator), NFPA 1021 (Fire Officer Qualifications), and NFPA 1041 (Fire Instructor Qualifications).* ***Priority 2***

The Department does not have an actual hands-on training facility as such, but they do improvise with various props and make-shift aids gathered in and around the Fire Station to utilize/facilitate on various training/drills covering NFPA/ISO topics. The Consultants were advised that within the City, there are various manufacturing/industrial, and warehouse occupancies where the Fire Department has conducted various on-site training exercises/tours from time to time. The Consultants were further advised that no major high hazard/target facilities, rail lines, pipelines, or such existed within their jurisdiction as major exposure hazards. It was found that the tallest building within the City was the historic five-story County Courthouse and that there were two (2) large-sized apartment complexes as well. The Thorn Apple River traverses through the center of town and presents exposure potential to water/ice rescue emergencies. The Fire Department is trained in surface water rescue and ice rescue practices and incorporates these areas into their training program.

In conversations with the Interim-Chief, it was found that there are opportunities available through the Barry County Fire Services Association to partake in various advanced Firefighter courses as well as

officer/leadership training including Fire Service Instructor certification. The Consultants were further advised that recent improvements through the association included "*POC friendly*" scheduling of nighttime and weekend courses to accommodate better availability. The current interim Fire Chief has been a long-time Instructor for the Barry County Fire Service Association including instructing various courses and serving as the Director of their Recruit Firefighter Training Academy. The recruit academy trains new Fire Department recruits from Barry County and surrounding counties (Including Hastings FD). Upon successful completion of the approximately nine-month course, recruits are certified as State of Michigan Firefighters level I and II. The table below provides the various certifications currently held by HFD members:

***Table 21: Hastings Member Certifications***

| ***Hastings Fire Department Certifications*** | |
|---|---|
| **State Certified Level** | **Members Certified** |
| Fire Instructor | 2 |
| Fire Officer | 1 |
| Firefighter I/II | 13 |
| Medical First Responder (MFR) | 6 |
| EMT-B (Basic) | 3 |
| EMT-P (Paramedic) | 2 |

It was found by the Consultants (reflected in the Certification Table shown above), that only one of the Fire Department's four (4) command officers is currently a Certified Fire Officer. It was pointed out that some Department officers have received some Fire Officer/leadership training over their tenure, but no certifications. It should be noted that all (non-probationary) Fire Department members are Michigan Firefighter I/II certified.

## Supervisor (Fire Officer) Training

As mentioned previously, only one (1) of four (4) Fire Department officers have received officer training resulting in certification. There is no apparent effort to encourage or provide officer development and/or leadership training for the Officers. Developing the next generation of leaders is an industry imperative. This type of training is not limited to the strategy and tactics/incident command training. It also encompasses the "soft" people issue skills required to properly communicate expectations, identify, and correct inappropriate behavior or performance, and deal with customer service matters in a consistent, professional manner. The absence of these leadership professional development opportunities will have a significantly negative impact on the Department as it goes forward. Among such topics/areas of training which should be considered for supervisors may include but not be limited to:

- Principles of Supervision
- Management vs. Leadership
- Ethics

- Dealing With Conflict
- Diversity
- Pregnancy
- Problem Solving
- Managing/Motivating POC/Volunteer Firefighters
- Documentation
- Delegation
- Strategic Planning
- Succession Planning
- Confidentiality
- Harassment

### *Recommendation – Officer Training*

- *The City and the Fire Department need to encourage all Department officers to enhance their training in filling the role as a Fire Department officer. It should be a focus for each officer to strive to attain a minimum Fire Officer I level certification. Many opportunities exist to attain this enhanced training.* ***Priority 2***

## Competencies vs. Training Hours

Beyond the actual training program, today's fire service-Volunteer, Paid-on-Call, Paid/Career or otherwise, requires more than simply teaching members how to perform their jobs safely; it requires *validation* of their *competency* to do so. A well-constructed training program will employ a system to ensure all members receive required training and document core competencies (practical training evolutions).

Competency testing should be observed by both the Instructor and Safety Officers if the department has such. Records of the testing should become part of the individual's training record. The evaluation should measure both knowledge and skills (routine evolutions) that each member is required to possess and maintain.

Through discussion/interviews with the HFD Officers and members and evaluation data/records, it was determined that the department currently falls short on these important necessities outlined above.

### *Recommendation – Competency Testing*

- *The curriculum utilized by the Fire Department should include a "skill drill" component, which accomplishes the purpose of competency testing and ensures the member is able to perform the task safely.* ***Priority 1***

## The Liability of Poor Training/Documentation

With an increasingly litigious society, the liabilities associated with poor training and/or poor documentation of that training are enormous. Within the last decade, there has been an increased tendency for municipalities/townships/districts to be stripped of their immunity protection when dealing

with an employee's injury or death. It is hoped that the Fire Department never experiences a Firefighter's line-of-duty death. However, in the event of such an occurrence or a serious line-of-duty injury, a large number of State and Federal agencies would conduct independent investigations. At a minimum, the Fire Department, District/Townships, or municipality would need to provide the investigators with the following:

- Documentation that the individual received training in the evolution(s) in which the death/injury occurred.
- Comprehensive written curriculum and lesson plan of the training topic.
- Attendance sheet with the individual's signature indicating he/she attended – *not a list of member's names with a check-off box.*
- Record of the instructor's qualifications to teach the topic.
- Competency documentation showing how the Department measured the ability of the individual to safely perform the task in which he or she was injured.
- Historical record showing how frequently this topic was instructed and what other topics supported a safe environment under the conditions found at the accident scene.

## *Recommendation – Documentation*

- *The City of Hastings and the Fire Department must realize their potential liability for lack of training and lack of proper documentation of training. Documentation of training is as important as the training itself. The Department would benefit from greater emphasis placed on training and documentation.* ***Priority 1***

The State of Michigan does not require or mandate any specific amount of training hours for Firefighters to maintain their certification as a Firefighter I or II, nor does the State conduct any audits of Fire Department training records. There are however, NFPA/ISO requirements/training hours for Firefighters to maintain their skills. The current annual ISO training standards/requirements are illustrated below:

***Table: ISO Annual Training Topic/Hour Requirements***

| ***ISO Annual Training Requirements*** | |
|---|---|
| **Topics** | **Hours** |
| Company Training | 192 |
| Hazardous Materials Training | 6 |
| Driver Training | 12 |
| New Driver Training | 60 |
| Officer Training | 12/Year |
| Facility Training (Drills) * | 18 |
| Pre-Planning Review | 1/year |
| *Total Firefighter* | ***228*** |
| *Total Officer* | ***240*** |

**Facility Training refers to training done at a training facility*

### *NFPA Job Performance Requirements (JPR)*

Governing bodies are not required to adopt the NFPA codes; whereas many view the NFPA terms, codes, and standards as a ***benchmark*** by which to judge against. Training drill records should indicate which NFPA *JPRs* were covered in a particular drill or training activity. Most Fire Service records management systems have simple ways to correlate training objectives with NFPA JPRs. The NFPA has standards that should be addressed by the HFD and include:

- *NFPA 1500-Standard on Fire Department Occupational Safety, Health, and Wellness Program*
- *NFPA 1401-Recommended Practice for Fire Service Training Reports and Records*
- *NFPA 1402- Standard on Facilities for Fire Training and Associated Props*
- *NFPA 1404- Standard for Fire Service Respiratory Protection Training*
- *NFPA-1407- Standard for Training Fire Service Rapid Intervention Crews*
- *NFPA 1410- Standard on Training for Emergency Scene Operations*
- *NFPA 1561- Standard on Emergency Services Incident Management System and Command Safety*

## Driver Training

More civilians are injured in crashes with emergency vehicles than are injured in home fires. The driving of Departmental vehicles, both non-emergency-everyday driving, as well as under emergency conditions (lights and sirens), is a routine part of providing services, but it is also one of the most important. Driving of any emergency vehicle is generally considered a "routine" duty, but the driving of Department-owned staff cars, SUVs, or small, medium, and large trucks does in fact, carry a higher degree of liability. Responding to or returning from a call is the second leading cause of death for Firefighters and EMS personnel according to the NFPA. Currently, the Barry County Firefighter Recruit Training Academy requires that all recruits complete a driver's training segment through the Emergency Vehicle Operators Certification Course (EVOC). The Chief advised that all members of the Fire Department approved for driving department apparatus have completed this certification course.

## National Incident Management System (NIMS) Training

The National Incident Management System (NIMS) under the Federal Emergency Management Agency (FEMA) is a collection of principles and methods that can be utilized by local, State, and Federal emergency managers as well as the private sector. A basic premise of NIMS is that all incidents begin and end locally and the focus is to better improve the nation's overall response to emergencies. The NIMS model does not take command away from State and local authorities, but rather provides a framework to enhance the ability of responders to work together more effectively. Large-scale national disasters in the past have suffered from a lack of coordination, authority, and a universally accepted plan to organize and mitigate such events. To that end, FEMA developed the National Incident Management System; each previous Incident Command System (ICS) course is needed to advance to the next ICS course number.

The Incident Command System or ICS is a standardized, on-scene, all-risk incident management concept. ICS allows its users to adopt an integrated organizational structure to match the complexities and demands of single or multiple incidents without being hindered by jurisdictional boundaries.

- ICS-100: Introduction to the Incident Command System: interactive web-based course
- ICS-200: Basic Incident Command System for Initial Response: interactive web-based course
- ICS-300 Intermediate ICS for Expanding Incidents: 24-hour ***classroom based.***
- ICS-400: Advanced ICS for Command and General Staff: 24-hour ***classroom based***.
- ICS-700a: National Incident Management System: An introduction
- ICS-800b: National Response Framework, An introduction

The NIMS ICS 300 course is *required* under the "*Homeland Security Presidential Directive (HSPD-5)*" for Fire Department company and command officers. This mandated course is designed to enhance coordination, compatibility, and safety on emergency scenes as well to receive federal funding, grants, training, and reimbursement of disaster recovery costs. Based on the ICS role of the HFD Officers as Incident Commanders, this course should be a requirement of their position as Department officers. Upon a review of the data and records, it was found that none of the Department officers have completed this required ICS-300 training certification course.

### *Recommendation – NIMS Training*

- *It is recommended that any Fire Department member who may serve as an incident command officer-Lieutenant rank or higher complete the NIMS ICS-300 course. Chief Officers should complete the NIMS ICS-400 Course.* ***Priority 2***

## Training Officer-Safety Officer

Two very important positions within the fire service today are absent from the HFD's roster-those being a *Fire Department Training Officer* and a *Fire Department Safety Officer*. Training oversite has been under the current Interim Fire Chief who until recently had been the long-tenured Assistant Chief. The Consultants were advised that the Assistant Chief's position had historically overseen the training duties and activities of the Department but did not hold the actual rank of Department "Training Officer." The HFD currently does not have a specific individual designated or assigned to coordinate, track, document and oversee the training program of the Department. Current training does not appear to routinely follow any recognized format with clear and concise outline/lesson plans for instructors. The Consultants were advised that there is no monthly or annual training schedule developed or posted, but that training was determined through member recommendation/requests.

It was further found that the Department has no dedicated Safety Officer position within the Department but was reported that "a few" of the officers had received some training in this area and have filled this role "as necessary," but with no formalized training. A designated or assigned *Department Safety Officer* would serve to promote Department-wide safety be it in and around the station, during training exercises,

as well as responding to and mitigating emergency scene operations. The importance of a Department Safety Officer cannot be overstated in the fire service today regardless of the size, type, or makeup of a Fire Department. This Department Safety Officer is needed to review current safety policies and procedures, conduct Department safety training, as well as respond to major incidents to act as the incident safety officer. The ability to recognize and forecast risk involving emergency workers requires knowledge, training, experience, and intuition of observance on an emergency scene. Away from the emergency scene, the role of the Department Safety Officer would involve working closely with the Fire Chief in establishing policies, procedures and oversite of firefighter and citizen safety. The standard for Fire Department safety officers is NFPA 1521-Standards/Qualifications for Fire Department Safety Officers.

### *Recommendation – Training Officer*

- *To enhance the training of all Fire Department members, the City of Hastings and the Fire Department should create the position of Department Training Officer. The responsibilities of the Training Officer would include, but not be limited to, the development of a comprehensive training curriculum, oversee all aspects of training, record training hours/competencies, track certifications and set standards for each instructor in presenting the training program.* ***Priority 1***

### *Recommendation – Safety Officer*

- *Fire Department safety would/should be enhanced through the creation of the position of Department Safety Officer. Safety should continue to be a concern of all officers and members, but having one person to coordinate and oversee all aspects of Fire Department safety would benefit the members of the Department overall. This Safety Officer for the HFD should be responsible for meeting the requirements as outlined in NFPA 1521 for a Safety Officer.* ***Priority 1***

# Public Education-Fire Prevention

## Public Safety Education

The Fire Chief indicated that historically public safety education within the HFD has been limited to the observed month of October recognizing National Fire Prevention Week. The Fire Department has routinely visited each of the four (4) grade schools within the City and showed the children the fire apparatus and spoke to them about fire safety. There have been occasions when the Fire Department has hosted an open house at the fire station to promote fire safety as well during that same timeframe.

Fire Safety Education is recognized as a very important aspect of spreading the word on this very important topic. Educating young children on the dangers of fire as well as fire safety education through these various topics is a very worthwhile endeavor for Fire Departments to promote. Many local, State, and Nationwide programs are available to Fire Departments to utilize as tools in this very worthwhile cause. Listed below are just a few organizations which have fire safety program materials available:

- National Fire Safety Council Inc. (NFSC). Fire & Life Safety Educational Materials & Programs www.nationalfiresafetycouncil.org
- U.S Fire Administration Educational Resources for Fire Service Educators www.usfa.fema.gov
- American Red Cross Fire Safety for Kids Program www.redcross.org

### *Recommendation – Public Safety Education*

- *It appears that the HFD does in fact provide limited public safety education and should be applauded for their efforts. Consideration should be given to the development of a formal public safety education program in conjunction with the schools through one of the available national programs as outlined in this section.* ***Priority 5***

## Fire Prevention

The HFD does not currently have a Fire Prevention Bureau and/or a Fire Inspector within the Fire Department. All inspections within the City are conducted/managed by a private contractor hired by the City. The service utilized is *Professional Code Inspection Services* located in Hastings.

In conversations with this firm, the Consultants were advised that they handle all new inspections, plan reviews or any other issues relating to such within the City of Hastings. They primarily conducted plan reviews for new construction and major renovation/remodeling projects -- both commercial and residential. They advised that they biannually inspected the larger apartment complexes within the City and conducted new construction fire alarm, sprinkler and hood and duct systems acceptance testing. There is no fire or building inspections done through either the City of Hastings or the Fire Department. The firm advised that they utilize the 2015 Michigan Building Codes and the 2019 NFPA Fire Codes including the Life Safety Code for reference. The Fire Chief advised the Consultants that for the larger

industrial occupancies within the City that the insurance company inspectors would routinely provide the Fire Department with copies of their annual inspections for these various occupancies, and they would be placed on file.

## Fire Pre-Incident Plan

A Fire Pre-Plan is a document developed by gathering general and detailed data that is used by responding personnel in effectively managing emergencies for the protection of occupants, participants, responding personnel, property, and the environment. Information typically contained in each pre-plan includes:

- Location—address
- Operating information and access
- Occupancy information
- Special hazards
- Type of construction
- Available water supply
- Building protection systems
- Utilities—including location of shut-offs
- Exposures
- Special resource considerations
- Technical rescue exposures
- Additional applicable information

The HFD does include such pre-incident planning within their emergency preparedness. An advantage to having a progressive pre-plan program—beyond the obvious prevention of fires—is to identify any unauthorized remodeling and/or building usage not approved or permitted by the City. Prevention is always more cost-effective and productive than suppression actions. The HFD does have paper copies of approximately 30 pre-plans for local business/industry occupancies stored in binders located at the fire station in the office area. Many fire departments find it beneficial to maintain these files in a manner to which they have this valuable information on scene during an emergency incident. Many types of electronic tablets, laptops, or devices are routinely utilized within the fire service today to accommodate this. With the limited number of pre-plans that the HFD maintains, their hard-copied binders would be an option to place on a piece fire apparatus as a starting point to utilize if needed. It is suggested that the pre-plans from the office are in some way provided for on-scene use.

## Fire Investigations

In the event of a fire within HFD's jurisdiction, the Consultants were advised that a cursory fire investigation would be conducted for cause and origin by the Fire Chief or the Department officer on scene. It was reported that the Department officers have some experience in initial fire scene investigation, but none possess any formalized training or certification as an investigator. The Fire Chief reported that most of their fires were found not to be suspicious in nature and that their fire loss estimates were just that--estimated. Any fire loss where the dollar amount was found to be substantially different

by the insurance company, their numbers would be inserted into the HFD fire report at that time. In the event a fire was in fact found to be suspicious in nature, the Fire Department would ask for assistance from the Hastings Police Department initially, but ultimately the Michigan State Police Fire Investigation Division-Grand Rapids Region, would dispatch an Arson Investigator. It was reported that the State Arson Investigator had been requested and responded approximately 3-5 times over that past 4-5 years, however no official data/documents were provided.

### *Recommandation – Fire Investigation*

- *The Fire Department should consider providing basic cause and origin fire investigation training for the Department officers. This training should follow NFPA 1033 Standards for Fire Investigation Officer.* ***Priority 3***

# Future Vision of the Hastings Fire Department

Hastings Fire Department has a very unique opportunity to bring a historically good Fire Department into one of today's great Fire Departments. The City leadership made the decision to hire their next Fire Chief externally. It is the intent of this document to assist the new leadership in moving the Department forward.

One of the most concerning observations by the Consultants during the on-site visits was the condition and lack of documentation in general and of the condition of the apparatus. The Department could not provide any of the needed documentation about the maintenance, repairs, or history of events regarding the apparatus. The Consultants were told that no new apparatus or major renovation of apparatus has occurred in the past 10 to 20 years, depending on the stakeholder comments. There had been minor repairs, but eight (8) of the ten (10) pieces of apparatus were over twenty (20) years old. For example, the Department could not provide any pump testing records and therefore, during the study, the Department had all of their apparatus that wasn't out of service tested. The results were that not a single fire apparatus pump passed. Arial apparatus which was twenty-three (23) years old, did not have any records that the main ladder had ever been tested; yet, it was in-service, and Firefighters were ready to climb it to perform a rescue or fight a fire. The condition of the apparatus illustrated a cultural problem; inasmuch as it was accepted by Department governance, Fire Department leadership, and members.

## Future Apparatus

Total future apparatus should consist of (as noted from the report):

- 1 – Engine: Minimum pump size of 1,750 GPM & 1,000 gallons water tank
- 1 – Pump/Squad: Minimum pump size of 1,500 GPM & 750 gallons water tank
- 1 – Tender: Minimum pump size of 500 GPM & 2,000 gallons water tank
- 2 – Brush Trucks: Minimum pump size of 200 GPM & 250 gallons water tank
- 1 – Arial Platform/Ladder: Minimum pump size 1,500 GPM & 95 to 100-foot main ladder
- 1 – EMS Rapid Response Vehicle for MFR incidents
- 1 – Chief's Vehicle
- 8 – Total

### *Apparatus Funding*

The report provides an apparatus replacement schedule and consideration to how funding for this apparatus needs to be implemented. First, fire/EMS apparatus does not need to be custom built; rather most major manufactures have stock specifications for apparatus that should more than meet the future needs of Hastings.

#### Capital Outlay

Governing officials often anticipate the price of replacement vehicles and place money into a savings account which draws interest. The interest will help offset the increase in price of apparatus over the

years. Another method is capital outlay in which the municipality purchases the apparatus, perhaps through financing; in both cases the apparatus is paid for, in full, at time of delivery.

### Lease Purchase

Lease purchase is basically a method for purchasing vehicles and paying for them over a period of years – perhaps five (5) or seven (7) years – without actually borrowing the funds. Using lease purchasing the City/District would buy the vehicle through a company that handles the purchase and then leases the fire engine back to the City/District. Payments are made for a period of years; at the end of the lease period, the City/District owns the fire engine.

### FEMA Assistance to Firefighters Grants Program (AFG)

The Federal Emergency Management Agency (FEMA) offers a number of grants to fire departments both large and small. The intent of the AFG program is to help Firefighters and other first responders obtain critically needed resources necessary for protecting the public and emergency personnel from fire and related hazards. FEMA is not the only source for apparatus grants and the City/District would be well advised to check with State and local agencies.

## Facility

Much discussion has occurred on replacement of the existing fire facility not whether it needs to be replaced, most stakeholders were adamant on that it did; rather whether it should be built new or the existing building refurbished. New verses refurbish decisions are very premature and the factors listed in the study need to be taken into consideration before movement on the fire facility. The Consultants do not wish to understate the need for a new four-bay facility for current and future needs of the Fire Department, as there is a definite need. In addition, the site of the new station was also raised, and this issue too will best be determined by referral to the station location factors listed in the report.

## Training

*"Train as if your life depends on it – because it does"* is not an overstatement of the needs to address serious changes in the HFD training program, especially documentation. Training is completely within the control of the Fire Department leadership and consideration to the appointment of a fulltime training officer or joint departments sharing of a training officer should be considered.

## Personnel Management

This section of the report provided numerous opportunities to ensure that all Federal, State, and local employment laws are being followed. The bottom line is that the members of the Fire Department under current Fair Labor Standards Act (FLSA) are considered employees and the governing officials must ensure that they are meeting all labor standards. Future staffing methodology should consider paid-on-call shifts perhaps leading to paid-on-premise (part-time).

## Fire Chief/Consultant

The Fire Chief makes the final decision as to the needs of the HFD not the Consultants. The Consultants fully support the City, District, and department leadership team in moving the HFD from a good Department to a great Department. The recommendations within this report should be looked upon as a booklet of opportunities for consideration for Fire Department leadership.

# Summary of Recommendations

| Hastings Fire Department - Recommendation Priority | | |
|---|---|---|
| **Priority** | **Topic** | **Recommendation** |
| 1 | Apparatus Air Pressure | *The fire station needs to be equipped with an air compressor and storage tank, which is piped to each apparatus that needs a certain level of air pressure to allow it to move* |
| 1 | Apparatus Maintenance | *It is essential for the leadership of the fire department to maintain accurate up to date apparatus maintenance records for the life of the apparatus* |
| 1 | Competency Testing | *The curriculum utilized by the fire department should include a "skill drill" component, which accomplishes the purpose of competency testing and ensures the member is able to perform the task safely* |
| 1 | Data | *The fire department should seek training in the use of their data management system ESO for all members who might be recording an incident; most providers of an RMS offer such training and in Hastings situation they could use "train the trainer" of RMS incident recording who in return would train the department members* |
| 1 | Data | *Officers from Lieutenant through Fire Chief. This training should include entering as well as important data re* |
| 1 | Documentation | *The City of Hastings and the fire department must realize their potential liability for lack of training and lack of proper documentation of training. Documentation of training is as important as the training itself. The department would benefit from greater emphasis placed on training and documentation* |
| 1 | Emission Exhaust | *The City should install an emission exhaust system that meets the NFPA 1500– Annex A requirements. Air scrubbers might be considered to capture exhaust from small power equipment that might be started in the station* |
| 1 | Employee Status | *The City needs to determine if they are going to treat members of the fire department as employees and follow all FLSA regulations; Or as volunteers and determine stipends for the types of activities the department wants to compensate members for* |
| 1 | Employee Status | *The City needs to ensure that the employee who works in two different departments, or had separate rates of pay, complies with FLSA in calculating overtime* |
| 1 | Employee Status | *When treating members of the fire department as employees, the City must establish an FLSA cycle, and begin to track all hours worked for the purposes of overtime* |
| 1 | MABAS | *The City should provide as much influence and support to the Emergency Management Directors efforts in creating a MABAS division that includes their fire and EMS providers* |
| 1 | OSHA | *The fire department leadership should continue to ensure that the OSHA "two-in/two-out" rule is practiced on all structure fires. Consideration of utilizing Automatic Aid Box Alarm Cards in certain situations should be explored in this endeavor* |

| | | |
|---|---|---|
| 1 | Safety Officer | *Fire department safety would/should be enhanced through the creation of the position of department safety officer. Safety should continue to be a concern of all officers and members, but having one person to coordinate and oversee all aspects of fire department safety would benefit the members of the department overall. This Safety Officer for the HFD should be responsible for meeting the requirements as outlined in NFPA 1521 for a Safety Officer* |
| 1 | Training Officer | *To enhance the training of all fire department members, the City of Hastings and the fire department should create the position of department training officer. The responsibilities of the training officer would include, but not be limited to, the development of a comprehensive training curriculum, oversee all aspects of training, record training hours/competencies, track certifications and set standards for each instructor in presenting the training program* |
| 2 | Data | *The Fire Department would benefit from a data quality assurance program to maintain data integrity* |
| 2 | Engine Hour Meters | *All new or renovated apparatus should be equipped with engine hour meters* |
| 2 | Job Descriptions | *Develop job descriptions to incorporate the job functions, minimum qualifications, physical requirements, and other relevant areas to describe each position* |
| 2 | NIMS Training | *It is recommended that any fire department member who may serve as an incident command officer-Lieutenant rank or higher complete the NIMS ICS-300 course. Chief Officers should complete the NIMS ICS-400 Course* |
| 2 | Officer Training | *The City and the fire department need to encourage all department officers to enhance their training in filling the role as a fire department officer. It should be a focus for each officer to strive to attain a minimum Fire Officer I level certification. Many opportunities exist to attain this enhanced training* |
| 2 | Personnel Records | *Coordinate with the City to determine employee related policies and their placement either in a department policy manual, or employee hand* |
| 2 | Personnel Records | *Distribute the Employee Handbook to all members and obtain written acknowledgment of receipt* |
| 2 | Personnel Records | *Ensure all active and inactive personnel files are maintained in secured personnel files, In the appropriate location* |
| 2 | Record QAP | *The department should develop and implement a training record quality assurance program aimed at reviewing training sheets/records to ensure that the necessary information is provided to properly record training for individuals and the Department. Members showing deficiencies in submitting records should be addressed* |
| 2 | Recruitment | *Develop an information recruitment pamphlet for distribution and on the website for drop-in applicants* |
| 2 | Recruitment | *Maintain all application screening processes and documentation* |
| 2 | Recruitment | *Increase the radius allowed to increase the applicant pool* |
| 2 | Recruitment | *Develop a standardized rating system to rank candidates during interviews* |
| 2 | Recruitment | *All applicant communications should be retained* |
| 2 | Recruitment | *Develop an offer letter template and include a reminder to applicants to authorize a background check in the employment application* |
| 2 | Replace Existing Fire Station | *The consultant recommends a new facility encompassing all of the facility components listed above to replace the existing fire facility* |

| | | |
|---|---|---|
| 2 | Training Standards | *The ISO/NFPA and other related standards should serve as a reference point and benchmark for quality and consistent training hours in developing a training program for the HFD. Due consideration should also be given to the Standards: NFPA-1002 (standards for professional firefighter qualifications), NFPA 1002 (Standards for Apparatus Driver Operator), NFPA 1021 (Fire Officer Qualifications), and NFPA 1041 (Fire Instructor Qualifications)* |
| 3 | False Alarms | *Reduction of false fire alarms can be reduced by regular maintenance, public education, fire inspections, immediate follow-up on all false alarms by the FD. The department should implement these steps, as necessary* |
| 3 | Recruitment | *Update the employment application to include a checkoff section for required and/ or preferred licenses or certifications* |
| 3 | Recruitment | *All personnel who participate in interviews should be trained in interview techniques/legal questioning* |
| 3 | Recruitment | *All applicant communications should be developed as a template for consistent communication* |
| 3 | Training Plan | *The Fire Department should develop a consistent monthly-multi-year training plan to address the various training needs of the department; prioritize the needs and develop the capacity and resources to properly address the training needs* |
| 5 | CFAI Accreditation | *The fire department should not seek international accreditation (CFAI) at this juncture; rather, the CFAI performance indicators and core competencies should be utilized as a model for quality and a benchmark for examining and evaluating current practices* |
| 5 | ISO | *An ISO classification of Class 4 is a good rating. The Consultants do not believe any additional resources or fiscal commitment should be made to reduce the classification to a Class 3; rather, the Township should attempt to maintain the Class 4 rating in the future* |
| 5 | ISO | *A fire protection service area PPC score of 6/10 is an average score for a service area* approximately *135 square miles; however, the Consultants do not believe any additional resources or fiscal commitment should be made to reduce the classification* |
| 5 | NFPA 1720 | *The City should not adopt NFPA 1720 standard. Adoption would include the adoption of all OSHA and NFPA standards by reference included in the document. However, a plan should be developed to meet as many NFPA 1720 standards as possible in the future* |
| 5 | Public Safety Education | *It appears that the HFD does in fact provide limited public safety education and should be applauded for their efforts. Consideration should be given to the development of a formal public safety education program in conjunction with the schools through one of the available national programs as outlined in this section* |

# Appendix A – Data Request

**Data Requested – McGrath Consulting Group, Inc. – *Fire/EMS Component***

**Directions:**

- *The data you submit at this time will be utilized in determining recommendations; therefore, **please ensure the data is correct**. New data after the draft report is presented will not be utilized.*
- 
- *Please put the data in an electronic Excel format*
- 
- *Depending on your data management system it could take up to two weeks to gather the information requested – if you need additional time, please contact me. If the document exceeds your email size, I will send you a DropBox link to submit your data. Please also put the data on a flash drive and present it to the consultant upon the first site visit.*
- *Show each year data separately i.e., 2020, 2021 and 2022 – do not group the years together.*
- 
- *Before you feel you need to conduct a hand count, please call me (815) 728-9111*
- 

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- **General Information**
  - Overview of the department
    - History
  - Overview of the service area protected
    - District
    - City/Village/Township
  - Population –
    - Residents of Township
    - Residents of other Protection Area
  - In-flux or Out-flux of Daytime Population

- **Governance**
  - Municipality, Town, City, Village, District, Township, etc.
    - Structure (Board, Council, Trustees, Commissioners etc.)
      - # of elected officials
      - Hierarchy (organization chart)
      - Member's term (years, staggered, term limits)
      - How is the president/chairperson determined
      - Authority flow
  - Fire/EMS Leadership
    - Organization chart

- Selection process of officers
- Job requirements:
  - Administrative
  - Supervisory
  - Operational
- Length of terms of officers
- Requirement/certifications needed for each officer position
- Fiscal responsibilities

- **Response District –**
  - Map of Coverage Area
  - Map of the District
  - Map of Area of Concern for Relocation of Station
  - Map of Contiguous Surrounding Area Showing Department Stations Locations
  - Total Square Miles Protected
  - Square Miles of Hydrant Area
  - Square Miles of Non-Hydrant Area

- **Personnel Management/Human Resources**
  - Current Roster of Members
  - Personnel (information needed for all employees)
    - List of members (sworn and non-sworn)
      - Hire date
      - Age or date of birth
  - Organizational Chart
  - # of Career
  - # of Paid On Call
  - # of Part-time (Paid On Premise)
  - # of Volunteers
  - # of Contractual
  - # of Other Employees (civilian)
  - Rank Structure (Number of Employees in Each Category)
  - Minimum/Maximum Staffing
    - Minimum staffing =
    - Maximum staffing =
    - # of days at maximum daily staffing (show for each study period year)
    - # of days at minimum daily staffing (show for each study period year)
  - Current salary of each employee (name, rank, salary)
  - Spreadsheet – name, rank, current salary,
  - Spreadsheet with the benefit breakout -health, pension, taxes, etc. for fiscal year of the study
  - Labor agreement
  - Department's By-Laws (if corporation)
  - Police & Fire Commission or Civil Service Regulations

- Employee Policy & Procedure Manual (electronic version)
- Promotional Process – including forms utilized
- History of Turnover (All Employees Last 3 Years – Include Reason and/or Exit Interview Data)
- Recruiting/Retention Programs
- Hiring Process (all forms)
  - Application
  - Hiring packet
  - Reference questions
  - Interview questions
  - Etc.
- Grievances/Discipline Issues
- Performance Evaluation process and forms
- Last year's overtime by employee – include rank
- FLSA pay cycle (if not in contract)
- SOG/SOP Manual – prefer electronic copy – (sure to include HR policy section)
- Department Employee's Handbook
- New employee Orientation Process – (packet and/or forms)

- **The Department**
  - Department's Strategic Plan
  - Department SOG's
  - Department Rules & Regulations
  - Annual Reports – Last 3 Years
  - Current ISO Rating
    - Provide complete ISO document
  - Last ISO On-Site Evaluation (copy of point distribution sheet)
    - Last On-Site Evaluation
  - Accreditations
  - Others

- **Emergency Activities –**
  - Total calls last ten years (no breakdown just total calls per year)
- ***In Addition***
  - **(NFIRS)** Type of Responses: *For each of the 3 years*
  - **Last 3 Years (All Nine (9) NFIRS Series)**

| NFIRS Series | Nature of Call | Calls 2020 | Calls 2021 | Calls 2022 |
|---|---|---|---|---|
| 100 | Fires | | | |
| 200 | Overpressure/Explosion | | | |
| 300 | Rescue/EMS | | | |
| 400 | Hazardous Conditions | | | |
| 500 | Service Calls | | | |
| 600 | Good Intent Calls | | | |

| NFIRS Series | Nature of Call | Calls 2020 | Calls 2021 | Calls 2022 |
|---|---|---|---|---|
| 700 | False Alarm/False Calls | | | |
| 800 | Severe Weather | | | |
| 900 | Special Incidents | | | |
| | *Total Calls* | | | |

- # Of Emergency Responses
- EMS Responses # of:
  - 1st Responder
  - ALS
  - BLS
  - Non-emergency Transports/Transfers, etc.
- Incidents by Time of Day
- Incidents by Day of the Week
- Incidents by Month
- Calls Breakdown by Area (City, District, Town, Etc.)
- Distribution by Shift
- Distribution by Station
- Response Times: (include documentation from dispatch)
  - Notification time
  - Turnout time
  - Drive time
  - Mitigation time
- Mutual Aid – Auto Responses (Given & Received) – With Whom? – Copy(ies) of Written Agreement
- Simultaneous (Overlapping) Call Data

- **Fire Station(s) – *include mailing address for each station – include City & Zip***
  - Current Facilities
    - # Of Stations – Street Address
    - Square Footage – (Floor Plans for each if available)
    - Age
  - Future Facility Plans/Needs Documents

- **Apparatus & Equipment –**
  - Type of Apparatus (I.E. Engine, Ambulance, Utility, Truck – Include Manufacturer)
  - Apparatus department ID number
  - Pump & Tank sizes
  - Mileage
  - Engine Hour Reading (if appropriate)
  - Vehicle VIN Number
  - Age of Apparatus
  - Manufacturer
  - Replacement Schedule

- Apparatus maintenance records
  - Internal
  - External
- Special Teams Apparatus
- Specialized Equipment: Haz Mat, Water Rescue, Etc.
- Radio, Type and Frequencies
- Computers (Number of, Type, Age, Replacement Plan)
  - In Apparatus?
  - Software Programs

- **Training**
  - Training Records (Last 3 years) <u>for each member</u>
    - Training schedule
    - Training hours per month and subject / per employee
    - Training Curriculum & Lesson Plan
    - Instructors qualifications
  - Training Manual
  - Certifications Categories (state)
  - Special Teams – certifications
  - All current employees' certification level

- **Safety Education**
  - Public Safety Education Programs
  - Public Safety Education Data (Last 3 Years)

- **Service Goals for the Future**
  - Your vision of the fire department in the future
  - Opportunities for shared resources beyond current agreements
  - Demographic changes that can be expected for the fire department

Any Additional Information Deemed Important

Revised: April 2023

# Appendix B – Equipment Needed on Apparatus

***Table 22: NFPA Equipment Needed***

| NFPA 1901 edition 2016 Pumper Fire Apparatus | |
|---|---|
| ***Quantity*** | ***Item - Ladders*** |
| 1 | Straight ladder equipped with roof hooks |
| 1 | Extension ladder |
| 1 | Folding ladder |
| ***Quantity*** | ***Item - Suction / Supply Hose*** |
| 20' | Suction hose |
| 15' | Supply hose |
| ***Quantity*** | ***Item - Fire Hose*** |
| 800' | 2-1/2" or larger |
| 400' | 1-1/2" or 2" hose |
| 1 | Hoseline nozzle 200 gpm |
| 2 | Handline nozzles 95 gpm |
| 1 | Smoothbore or combination nozzle w. 2-1/2 shutoff minimum 250 gpm |
| ***Quantity*** | ***Item - Miscellaneous Equipment*** |
| 1 | 6 lb. flathead axe |
| 1 | 6 lb. pickhead axe |
| 1 | 6 ft. pike pole or plaster hook |
| 1 | 8 ft. pike pole or longer |
| 2 | Portable hand lights |
| 1 | Dry chemical fire extinguisher |
| 1 | 2-1/2-gal water extinguisher or larger |
| 1 | SCBA cylinder for each SCBA carried |
| 1 | First aid kit |
| 4 | Combination spanner wrenches |
| 2 | Hydrants wrenches |
| 1 | Double female 2-1/2" adapter with National hose threads |
| 1 | Double male 2-1/2" adapter with National hose threads |
| 1 | Rubber mallet |
| 2 | Salvage covers minimum size 12 ft. x 14 ft. |
| 2 or more | Wheel chocks |
| 1 | Traffic vest for each seated position |
| 5 | Fluorescent orange traffic cones no less than 28" in height |
| 5 | Illuminated warning devices - such as road flares |

*Table 23: ISO Engine Company Equipment Needed*

| ISO Engine Company Equipment Needed | |
|---|---|
| ***Quantity*** | ***Item - Hose*** |
| 15' | Soft-suction or 20' hard-suction |
| 400' | 1-1/2", 1-3/4", or 2" hose |
| ***Quantity*** | ***Item - Master Stream Device*** |
| 1 | 1,000 gpm master stream appliance |
| ***Quantity*** | ***Item - Nozzles*** |
| 1 | 2-1/2" Playpipe with shutoff: 1", 1-1/8", or 1-1/4" tips |
| 1 | 2-1/2 combination spray with shutoff |
| 2 | 1-1/2" or 1-3/4" combination spray with shutoff |
| ***Quantity*** | ***Item - SCBS*** |
| 4 | 30 - minute minimum SCBA |
| 4 | Extra SCBA cylinders |
| ***Quantity*** | ***Item - Other*** |
| 2 | Salvage covers (minimum size 12' x 14') |
| 2 | Electric handlights |
| 1 | Hose clamp |
| 1 | Hydrant hose gate (2-1/2") |
| 1 | Gated wye (2-1/2" x 1-1/2" x 1-1/2") |
| ***Quantity*** | ***Item - Radio*** |
| 1 | Mounted |
| 1 | Portable |
| ***Quantity*** | ***Item - Ladders*** |
| 1 | 12' to 16' roof |
| 1 | 24' extension or larger |
| ***Quantity*** | ***Item - Annual Test*** |
| 1 | Pumper |
| 1 | Hose |

*Table 24: ISO Service Company Equipment Needed*

| ISO Service Company Equipment Needed | |
|---|---|
| ***Quantity*** | ***Item - SCBS*** |
| 4 | 30 - minute minimum SCBA |
| 4 | Extra SCBA cylinders |
| ***Quantity*** | ***Item - Pike Pole*** |
| 2 | 3' or 4' |
| 4 | 6' or longer |
| ***Quantity*** | ***Item - Radio*** |
| 1 | Mounted |

| *ISO Service Company Equipment Needed* | |
|---|---|
| 1 | Portable |
| ***Quantity*** | ***Item - Ladders*** |
| 1 | 24' extension or larger |
| 1 | 16' or longer |
| 1 | 10' or longer |
| 1 | 14' combination or longer |
| ***Quantity*** | ***Item - Other*** |
| 6 | Salvage covers (minimum size 12' x 14') |
| 1 | Electric generator (3,000 watt) |
| 3 | Portable floodlights |
| 1 | Smoke ejector (5,00 cfm) |
| 1 | Portable thermal cutting unit |
| 1 | Saw - power (chain or heavy-duty rotary type) |
| 4 | Electric handlights |