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Section 1 - INTRODUCTION

Structural Fire Management is defined as the protection of people, contents, structures, and resources from the effects of a structural fire. Structural fires have caused deaths, injuries and extensive damage to buildings in the National Park system. It is essential that fires be prevented, in order to protect life and personal property, as well as the irreplaceable cultural resources within the parks.

At the park level, the best way to achieve this goal is with a fully implemented and well-documented structural fire prevention program. Effectively addressing structural fire prevention involves a wide variety of topics and issues, including:

- Building design.
- Building construction.
- Installation and maintenance of fire detection, alarm and suppression systems.
- Regular fire and life safety inspections of building and fire systems.
- Training.
- Establishing and maintaining fire agreements.
- Developing, maintaining and operating a firefighting force (in some areas).

The *National Park Service Management Policies* contain a structural fire policy called the *Structural Fire Protection and Suppression Program*. It includes detailed operational policies, standards, procedures and accountability.

Each park unit can use this program to develop, implement and maintain a level of structural fire protection and suppression capability that meets the unit's unique requirements. The program has several goals:

- To ensure that all areas within the system have an appropriate level of protection.
- To ensure that protection is provided in a safe and cost-effective manner by qualified personnel.
- To ensure that the most effective and appropriate concepts, techniques, and equipment will be used for structural fire protection.

The first step for each Park Superintendent is to complete a structural fire program review. This reference manual provides the standards, direction and resources necessary to create a practical and workable plan based on the program review results.

Structural fires are preventable. By implementing the standards in this manual, the National Park Service can reduce the deadly and costly hazards of future fires.

The National Park Service has adopted the National Fire Protection Association (NFPA) Codes and Standards as a foundation for its structural fire program. However, some circumstances will require standards that exceed the NFPA minimum codes.

This manual contains the minimum requirements to establish a reasonable level of fire safety and property protection from fires and explosions. These requirements include:

- Inspection of buildings, processes, equipment, systems, and other fire and related life safety situations.
- Investigation of fires, explosions, hazardous materials incidents, and other related emergency incidents handled by fire service entities.
- Review of construction plans, drawings, and specifications for life safety systems, fire protection systems, access, egress, water supplies, hazardous materials and other fire and life safety issues.
- Fire and life safety education of fire engine companies, employees, responsible parties, and the general public.
- Existing occupancies and conditions, design and construction of new buildings, and the remodeling, rehabilitation, renovation, or alteration of existing structures or buildings.
- Storage, use, processing, handling, and transportation of hazardous materials.
- The design, alteration, modification, construction, maintenance, and testing of fire protection systems and equipment.
- Access requirements for fire engine company and department operations.
- Hazards from outside fires (in vegetation, trash, building debris, etc.)
- Regulation and control of special events including (but not limited to) holiday celebrations, exhibits, trade shows, amusement parks, haunted houses, and other similar special events.

- The interior finishes, decorations, furnishings, and other combustibles that may contribute to fire spread, fire load, and smoke production.

For further guidance refer to Appendix A for Structural Fire related reference material.

Structural Fire Services

Regional Structural Fire Management Officers (RSFMOs) provide many different services to park units in the areas of structural fire suppression, detection, and education. They can assist with determining engine company needs and proper staffing levels, as well as offering plan reviews, educational opportunities and professional advice.

Per *Director's Order 58*, the Structural Fire Program will, at a minimum, comply with the requirements of the National Fire Protection Association and its family of codes and standards when providing technical assistance regarding new and existing construction, rehabilitation or renovation, fire suppression, fire prevention, and any other areas in which structural fire or life safety are involved.

There are units within the Service that must sustain a fire engine company operation, but it is also understood that the vast majority of park units cannot support such operations. It is the policy of the Structural Fire Program to support park-based fire engine companies wherever it is possible and practical to do so. It is also the program's policy to recommend decommissioning of fire engine companies that are insufficiently funded, staffed, or trained.

It may be logical to assume that the ability to send a fire engine and trained staff to the scene of a fire is the "proper" answer to the Service's structural fire deficiencies. But often it is not the preferred, or even the most prudent, choice. Instead, the national policy—which should be carried out at the park level—is to prevent fires in the first place; and, when they do happen, to protect life and property and keep the resulting damage to a minimum. A combination of preventive measures should be employed, such as:

- Ongoing fire prevention education for employees, concessionaires, and visitors.
- Installing and maintaining fire suppression and/or detection systems.
- Conducting regular fire prevention inspections.
- Requiring code-compliant fire rated and fire resistive construction.

Fire Safety Requirements

New buildings (including employee housing) shall have both automatic sprinkler protection and automatic smoke detection systems. The smoke detection systems will report to a 24-hour a day monitoring point. The Park can make application to the Regional Authority Having Jurisdiction (AHJ) requesting that an exemption be granted to the sprinkler and monitoring requirement.

Buildings undergoing renovation, remodeling, rehabilitation, or other alterations—and buildings with a change in occupancy—shall have automatic sprinkler systems and automatic smoke detection systems installed. The Park can make application to the Regional AHJ if circumstances permit an exemption to the requirement(s).

New buildings, other than employee housing, designed for less than 10 occupants may apply to the Regional AHJ for an exemption from the automatic sprinkler requirement where extremely impractical conditions may prevent its installation and/or proper operation.

Wildland fuels around the exteriors of structures will be maintained according to the *International Wildland-Urban Interface Code* of the International Code Council. Any exemptions to this must be approved by the Regional AHJ.

Where exemptions from sprinkler/smoke detection requirements or Wildland Urban Interface clearances are requested, the Park Superintendent must apply to the Regional AHJ for an exemption. The Superintendent shall enumerate and explain the reasons for any exemption request, including:

- The construction type.
- The planned contents of the building.
- The importance of the structure to the mission of the Park.
- Alternate plans for protection of the building and its occupants from fire.

Concession Requirements

If the concession wishes to have an exemption to any of the code requirements including the sprinkler/smoke detection or Wildland Urban Interface requirements, they must apply through the Park Superintendent to the Regional AHJ as stated above.

Authority Having Jurisdiction

Director's Order 58 gives the Regional Director the responsibility as the Authority Having Jurisdiction (AHJ). The Regional Director can re-delegate AHJ responsibility to the Regional Structural Fire Management Officer (RSFMO). The RSFMO may further re-delegate as follows:

- A Park Superintendent may request that a specific park employee be delegated as the Park AHJ. This is done by applying to the Regional Director, including details of the training and background that qualify this employee to carry out AHJ duties.

- If the AHJ transfers or retires, a new AHJ for that Park can only be named through a new application and approval process.

It is anticipated that very few Park-level AHJs will be named, due to the training requirements and the individual Park needs for this level of skill.

Section 2 – STRUCTURAL FIRE PROGRAM JOB DESCRIPTIONS

WASO

The Structural Fire Advisory Group (SFAG) provides strategic oversight to the NPS Structural Fire Management Program to improve its overall effectiveness. SFAG members act as advocates for the program, and as contacts between the program and agency personnel. The group's input is offered with these goals in mind:

- To provide oversight and direction to the Program.
- To monitor and evaluate the Program's effectiveness.
- To report to the Associate Director for Visitor and Resource Protection about Program progress and recommendations.

National Level Positions and Responsibilities

The National Structural Fire Management Office provides overall direction for the Structural Fire Program. Individual job titles and responsibilities are as follows:

Structural Fire Program Manager - This position directs the National Structural Fire Office, setting the service-wide direction for the structural fire program. Responsibilities include setting overall program goals and standards, and oversight of the national program. This person also coordinates the programs of different regions, ensuring that structural fire concerns are included in the various service programs.

National Training and Education Officer –This position is responsible for the service-wide Structural Fire Training and Education Program. Responsibilities include developing curriculum, coordinating training, and developing and implementing fire safety programs for employees and engine companies.

Concessions Liaison - This position has responsibility for ensuring that concessionaires and the Park work together to comply with the Park's structural fire program.

Facilities Liaison - This position has responsibility for ensuring that the facilities management program complies with the Park's structural fire program.

Fire Protection Engineer – This position has advisory oversight and responsibility for fire protection engineering. This includes possessing a professional knowledge of structural fire science and fire protection engineering, in order to develop and implement an integrated approach to the agency's structural fire management program; and to determine and implement the latest fire-related technology. Currently, this position only exists in the Denver Service Center.

The person in this position must be a licensed Fire Protection Engineer (FPE). FPEs used on a contract or consulting basis, shall meet this requirement.

Regional Level Positions and Responsibilities

Regional Structural Fire Management Officer – The Regional Structural Fire Management Officer (RSFMO) is the delegated AHJ for the region, with direct oversight and responsibility for all structural fire prevention and suppression issues within the region. This includes professional knowledge of structural fire science, in order to develop and implement an integrated approach to the agency's structural fire management program; and to determine, establish and apply the latest fire-related technology.

Regional Fire Inspector/Structural Fire Prevention Specialist – This person is required to have extensive knowledge of fire science and management concepts. These include:

- Principles of combustion and fire growth.
- Building construction and occupancy classifications.
- Building inspection procedures and building plan review.
- Research and interpretation of building and fire codes.
- Fire hazard evaluation.
- Site access and means of egress.
- Water-based fire protection and water supply systems.
- Portable fire extinguishers and other types of extinguishing systems.
- Fire detection and alarm systems.

This person also serves as a resource consultant for structural fire safety education and training programs.

Park Level Positions and Responsibilities

Very few Parks have all the positions noted here. All Parks must have a Structural Fire Coordinator, with additional positions filled based on the individual Park's needs.

Park Structural Fire Coordinator – The Park Structural Fire Coordinator (PSFC) is found in all Parks, and is a collateral duty position. The Coordinator serves as the primary point of contact within the Park for structural fire issues.

Park Structural Fire Chief – Found in Parks that maintain their own fire engine company(s). This person must have the experience to develop programs that improve and expand the unit's structural fire program, building workable partnerships with the public. Just as important, this individual should have the ability to counsel fire company members and assist with employee development.

This person must be familiar with budget procedures, revenue sources and funding mechanisms of the agency, and be capable of creating a program budget that reflects the unit's needs, organizational goals, and budget guidelines.

The Chief must accurately evaluate park fire protection systems and equipment provided for each of the park's buildings and facilities and determine whether they are appropriate, and installed in compliance with applicable codes and standards. This evaluation includes ongoing observation of the structures, potential hazards, and fire protection systems. The evaluation must also identify and document any deficiencies, and report them according to NPS policies. The Chief must be able to perform code compliance evaluations for issues like emergency vehicle access, required fire flows, hydrant location and spacing.

Park Chief Officer – Only found in Parks with fire engine companies. This person serves as acting Park Fire Chief whenever the Chief is absent from the Park. They must have many of the same skills as the Park Fire Chief, but may have less experience in some areas. The Park Chief Officer must be able to develop and maintain programs that improve and expand the units' structural fire program into one that builds mutually beneficial partnerships with the public. This individual should also have the experience and ability to counsel fire company members and assist with employee development.

This person must be familiar with budget procedures, revenue sources and funding mechanisms of the agency, and be capable of creating a program budget that reflects the park's needs, organizational goals, and budget guidelines.

Park Fire Prevention Officer – This position must be capable of evaluating inspection reports, forms and checklists for completeness and accuracy. This person must be familiar with all applicable codes, agency standards, policies, and procedures, and must be able to ensure that the information contained in the report forms and checklists are concise and correct, and that the information addresses all pertinent issues.

Responsibilities include being able to review proposed codes, ordinances, and other legislation from draft documents, and documenting their potential impact on fire safety and code enforcement activities in the Park. They must also have the ability to implement or enforce a permitting process, and/or evaluate consequences of improper enforcement.

The Fire Prevention Officer is responsible for implementing and managing the Park's fire prevention and life safety education programs.

Park Fire Inspector – This position must be capable of performing building and fire code-related research, and clearly express code requirements, both verbally and in writing. This includes the ability to interpret codes, recognize hazardous conditions, conduct code enforcement inspections, and make enforcement-related recommendations in areas such as building construction, occupancy, fire protection, and hazardous environments.

The position requires a basic understanding of fire behavior, flame spread, smoke development, ratings of contents, interior finishes, building construction elements, decorations and decorative materials, furnishings, and safe housekeeping practices.

Engine Company Officer – This position must be able to make personnel assignments that maximize efficiency, as well as evaluate and counsel fire company members and assist with employee development. They must be able to develop programs that improve and expand the Park's structural fire program by building positive partnerships with the public.

Engine Company Officers can also be qualified to conduct Live Fire training, in accordance with NFPA 1403.

Driver/Operator – Driver/Operators must obtain the appropriate type of driver's license required by their state licensing authority for the type of vehicle they will operate. It is recommended, each operator will obtain a commercial drivers license (CDL).

The position also requires the ability to keep the fire department vehicles in good working order, by performing routine tests, inspections, and service to the following systems and components according to manufacturer's specifications. The systems include, but are not limited to:

- Batteries
- Brake systems
- Coolant systems
- Electrical systems
- Fuel and filters
- Hydraulic fluids
- Tires
- Steering systems
- Belts and hoses
- On-board tools, appliances and specialized equipment

Certified Structural Firefighter – This position has the ability to determine the need for command, to organize and coordinate an incident management system until command is transferred, and to perform fire-fighting and other emergency-related duties in conformance with applicable NFPA and other fire and safety regulations.

The Firefighter must understand principles of:

- Fire streams.
- The principles of the Incident Command System.
- Fire dynamics.
- Building Construction.
- Principles of Ventilation.
- Nozzle types and design, operation, pressure effects, and flow capabilities.
- Dangerous building conditions created by fire.
- Principles of exposure protection.
- The role of the “backup team” in fire attack situations.
- Techniques for exposing hidden fires.

Section 3 - CONTENT OF THE STRUCTURAL FIRE MANAGEMENT PLAN

This chapter establishes criteria for the content of a written Structural Fire Management Plan (SFMP) as required in *Director's Order 58*. Specific elements of the plan may vary from park to park, depending upon the complexity of the Structural Fire Program.

Responsibility

The Park Superintendent is responsible for ensuring policy compliance and the technical and operational soundness of a SFMP. The Superintendent should consult with the Regional Structural Fire Management Office staff. Each NPS unit is required to review and update its SFMP annually, or after a structural fire incident occurs. This review is essential to ensure that the plan continues to conform to current, standards, laws, objectives, procedures and strategies. Each park unit should receive a regional level SFMP review every five years.

The "Structural Fire Program Review" (SFPR) will assist in completing the SFMP. The SFPR is a standardized process of evaluating a park's structural fire capabilities and needs. (See Section 9 of this manual for details about what a Structural Fire Program Review entails.)

The Park Structural Fire Coordinator, in conjunction with the Superintendent, has the authority to fully implement all elements of the SFMP

Plan Requirements

The SFMP is a public document. It is written to be clearly understood and carried out by the Park staff. It focuses on operations and policy, but can refer to extensive supporting documentation or information, which may be, located elsewhere.

There are specific content requirements for the SFMP and optional elements. Exclusions of required sections may be made only with the approval of the Regional AHJ.

The completed SFMP is forwarded by the Park to the Regional Structural Fire Management Officer (RSFMO). The plan becomes effective only upon approval of the Park Superintendent. The RSFMO must retain a file copy of each Park's SFMP.

Prior to approval the Regional AHJ will review the SFMP.

The plan:

- Has life safety as its first priority.
- Fire prevention and education will be the primary means to achieve structural fire management objectives that protect life, property, and resources.
- Has been developed with internal and external interdisciplinary input, and reviewed by appropriate subject matter experts.
- Is based on a comprehensive structural fire program review (Chapter 9).
- Designates a Structural Fire Coordinator for the Park.

The procedures for developing Structural Fire Management Plans and an outline of its contents are as follows:

Structural Fire Plan

Introduction

A. State the reasons for developing this plan. Include a short description of the area covered by the plan.

B. Summarize the collaborative processes used to the fire management plan, as well as additional collaborative opportunities that are available as the fire management plan is implemented.

C. State that the plan will implement fire management policies and help achieve Service and resource management goals.

D. State that the plan meets National Environmental Policy Act (NEPA) and National Historical Preservation Act (NHPA) requirements, and provide a brief description of the compliance actions.

E. Cite authorities for implementing this plan (See DO-58 for list of authorities).

Planning Compliance

This section identifies, in broad programmatic terms, how the structural fire management plan correlates with the direction found in other local planning documents, including General Management Plans, Museum Plans, and Natural and Cultural Resource Management Plans.

Fire Protection Objectives

General

Fire safety objectives provide targets as a means to measure success. The fire safety objectives should address the broad issues of life safety and the preservation of site mission, collections and structures.

Within the bounds of each broad issue, any number of related subsets can be established. In creating fire safety objectives for the site, it is important to set goals that are both realistic and achievable and to avoid trivial issues.

Objectives should be specific, i.e.; provide a high probability that smoke from a fire will not extend beyond the floor of fire origin, or; provide a high probability that all critical collections outside the room of fire origin will be unaffected by a fire.

Structural Fire Program Reviews aid Parks in identifying fire safety objectives and the complexity of the Park's structural fire program. The park is responsible for monitoring the progress being made towards satisfying the objectives.

Life Safety

Life safety will always be the first priority. Objectives deal with limiting the probability of death or injury to visitors, staff and fire fighters. When setting objectives, consideration is given to persons directly involved with ignition, within the room of fire origin, in adjacent rooms, on the floor of fire origin and within the building of fire origin.

Preservation of Site Mission

The goals developed here focus on limiting the probability and extent of damage to assets which are critical to the site mission. Such assets include equipment, functions, documents, resources and structures.

When setting objectives, consideration has been given to assets directly involved with ignition. Also considered were items within the room of fire origin, in adjacent rooms, on the floor of fire origin or within the building of fire origin. Consideration has also been given to total destruction or loss, extended down-time for repair or replacement and short term down-time for repair or replacement.

Preservation of Collections

The objectives developed herein deal with limiting the probability of destruction or damage to collections and records by flame, heat, smoke and corrosive byproducts and suppression water during a fire. Collections include: historic artifacts, archival materials,

photographs, natural history specimens and archeological collections displayed or stored on site.

The objectives also deal with limiting the probability of post-fire damage by mold, mildew, moisture, exposure and temperature changes. Objectives recognize the potential for protection in place as well as removal and relocation pre-fire, during a fire and post fire.

Objectives consider collections directly involved with ignition, items within the room of fire origin, in adjacent rooms, on the floor of fire origin and within the building of fire origin.

Preservation of Structures

The objectives developed under this heading deal with limiting the probability of destruction or damage to historic and non-historic structures by flame, heat, smoke and water during a fire. They also address post-fire damage by wind, weather, and temperature changes. Objectives consider limiting the extent and the probability of the risks to the building structure and fabric.

Organization / Responsibilities

Superintendent

Structural Fire Coordinator

Site or Building Managers

Administration

Maintenance

Protection

Visitor Services

Interpretation

Curatorial

Concessions

Cooperators

Fire Prevention and Protection

- Education/Training
- Evacuation Procedures / Fire Drills
- Fire Extinguisher Use
- Employee and Public Education
- Inspections/Testing
- General Fire and Life Safety Inspections
- System Acceptance Testing
- Periodic System Inspection / Testing
- Fire Extinguisher Inspection and Testing
- Maintenance
- General Building Maintenance
- Suppression System
- Detection/Notification System
- Plan Review
- Construction Design
    - *New*
    - *Renovation*
    - *Change of Occupancy*

Fire Protection System Design

Structural Fire Plan Update

- Responsibility
- Periodicity

Operational Plans and Manuals

Responsibility

Periodicity

Fire Incident Reporting

Reporting Criteria

Reporting procedures

Building Specific Plans

Building specific will be developed for each facility in compliance with 29 CFR 1910.38 and 1910.39. Park Structural Fire Management Plans will reference the required elements below. Building specific plans can be maintained in the Park Structural Fire Management Plan or in other appropriate park files. Occupant Emergency Evacuation plans must be made available to all employees.

Occupant Emergency Evacuation

Objectives

Emergency Notification Procedures

Emergency Evacuation Procedure

Responsibilities

Equipment

Training

Employee Accountability Procedures

Appendix

Notification Call List

Evacuation Diagrams

Fire Pre-Incident Plan

Area Map

Floor Plans

Physical Elements and Site Considerations

- *Construction*
- *Building Services*
- *Site Considerations*
- *Special Considerations*
- *Museum Collections*

Occupant Considerations

- *Life Safety*
- *On Site Emergency Organization*

Protection Systems and Water Supplies

- *Water Supply*
- *Automatic Suppression Systems*
- *Standpipe Systems*
- *Automatic Detection Systems*
- *Protective Signaling Systems*
- *Smoke Management*

Special Hazard Considerations

- *Transient Conditions*
- *Inventory*
- *Special Hazards*

Emergency Operations

Incident Notification

FD Operations

Accountability System

Emergency Response Plan

This section details Park's structural fire response strategy.

Option 1 - Immediate evacuation of all personnel on alarm and notification of the appropriate fire suppression forces.

Option 2 - All personnel are trained in fire extinguisher use, and personnel in the immediate area of a fire attempt to control it.

Option 3 - Only designated personnel are trained in fire extinguisher use.

Option 4 - A fire engine company that is trained and properly equipped to fight structural fires using protective equipment and breathing apparatus. This company may either be Park-based, or external with a Mutual Aid agreement.

Fire Department Operations (cooperator)

Contact Information

Notification Procedures

Pre-Incident Planning and Walk Through

Access to park facilities

Engine Company Operations

Engine Company Operations, in compliance with chapter 10, may be addressed in associated Standard Operation Procedures or Field Manuals.

Staffing and Response

Training

Equipment

Apparatus

After Action Reviews

Procedures for conducting After Action Reviews of Structural Fire Incident Response Operations.

Cause and Origin Investigations

Park specific application of Chapter 12.

Record Keeping

This section should address the Park's procedures for maintaining the following records.

Training of staff and volunteers, including fire evacuation drills and use of portable fire extinguishers.

Inspection, testing, and maintenance reports for all facilities' installed fire safety equipment and systems, including records of actions taken to correct deficiencies.

As-built plans, specifications, wiring and layout diagrams, and acceptance test reports for all fire protection systems. This includes detection, alarm, and suppression systems, as well as the park water supply and distribution systems.

Fire Emergency Response Plans and any pre-fire plans.

Fire Protection Condition Assessments: inspection reports by the AHJ, contract engineering firms, state/local fire service officials, and the Park's structural fire personnel. Records must also be kept of actions taken to correct deficiencies identified during each inspection.

Fire protection system(s) activation and alarm reports, complete with the cause of the alarm or activation, the response, and the corrective action(s) taken.

Full reports of all fire incidents, including cause, extent of damage, response, and recovery.

Wildland Urban Interface corrective actions and surveys

Agreements.

Concessionaire Structural Fire Agreements and records.

Post-incident procedures.

Records of any opening and/or closing of facilities.

Appendix

Fire Safety Improvement Plan

Comprehensive Fire Protection Condition Assessment Deficiencies

Annual Inspection Deficiencies

Corrective Actions

General Agreement with Fire Department **(optional)**

Current Contract for Suppression System Inspection and Maintenance **(optional)**

Current Contract for Detection System Inspection and Maintenance **(optional)**

Section 4 - FIRE CODE COMPLIANCE

The purpose of this section is to set forth the operational policies and procedures necessary so the Park's Structural Fire Management Program meets the latest fire codes and standards. Effective structural fire management is essential to the protection of life, property and significant cultural resources.

Structural fire management is defined as the protection of people, contents, buildings, structures, and resources from the effects of fire. At the park level, the most effective way to achieve this goal is with a fully implemented and documented fire prevention program.

Policy

Life safety is, and will at all times be, the first priority in all National Park Service fire management activities. Further, the NPS is committed to protecting all resources entrusted to its care, and focuses on preventing fires and minimizing the resulting damage in accordance with:

- *Director's Order 58* - Structural Fire Management.
- *Director's Order 50 and RM-50B* - Occupational Health and Safety Program.
- NPS Management Policies.

Director's Order 58 states: "The National Park Service hereby adopts, and will enforce as minimum standards, the most current version of the National Fire Protection Association's (NFPA) Fire Prevention Code (NFPA 1), Life Safety Code (NFPA 101), and all other associated structural fire codes and standards. The purpose of these codes is to prescribe minimum requirements necessary to establish a reasonable level of fire safety, and to protect property from the hazard created by fire. NPS adopted standards may be at variance with state and/or local fire safety codes. Where conflicts arise in the codes and standards, the Service will adhere to the more stringent requirements."

Objectives and Responsibilities

The objective of fire prevention is for all personnel to recognize and eliminate hazardous conditions, and to prevent the loss of life, injury, or property damage from fire. Prevention is the primary means by which the NPS will meet its fire safety responsibilities. A well-staffed, documented and funded prevention program supported by management is the best way to prevent the loss of structures, life and property.

The Superintendent for each Park is responsible for assuring adequate funding for proper inspection, testing and maintenance (ITM) of all fire protection and life safety systems by properly trained and/or qualified personnel.

Authority for Inspection and Abatement

In accordance with *DO-58* IV.I, The National Park Service adopts the NFPA 1 *National Fire Prevention Code*. Per NFPA 1-4: "...the Authority Having Jurisdiction (AHJ) shall administer and enforce the Code, inspect, order any person(s) to remove or remedy dangerous or hazardous condition or material."

In accordance with *Departmental Manual*, Part 485, Chapter 6 and *RM-50B*, Section 4: "...in the event that an imminent danger condition is found, corrective/protective action will be immediately initiated, and, if necessary, the operation will be stopped and/or the area will be evacuated, except for those needed to abate the condition."

In short, the Authority Having Jurisdiction (AHJ) is the person with responsibility for taking immediate action to rectify a hazardous situation.

Plan Review for Fire Code Compliance

Fire code compliance entails both fire protection and life safety features. The typical design process has three (3) phases: Schematic Design, Conceptual Design Development, and Construction Documents. All plans for each of the three phases shall be submitted to the Regional Director for review by the AHJ.

<u>New or Proposed Structures</u>

The development team must have a Fire Protection Engineer as a team member to ensure Structural Fire requirements are clearly understood and followed. Any exception to this rule must be made in writing by the Regional Director.

Where additional expertise is needed, the use of Indefinite Delivery Indefinite Quantity (IDIQ) fire protection engineers or other qualified individuals for third party review may be required by the AHJ in accordance with NFPA 1, *Uniform Fire Code*. If third party reviewer(s) are hired, they must provide a thorough evaluation and recommend necessary changes to the proposed design, operation, process or new technology to the AHJ. Third party reviewer(s) are to be provided with all project documents and given reasonable time to review them, prepare their reports and communicate findings to the AHJ prior to the comment due date.

Based on the complexity of the project, the AHJ may require the development team to prepare a Fire Safety Plan to guide the design of the building. The Plan should contain

the following elements; however, based on the complexity of the building, some of them may not be required:

INTRODUCTION

DESIGN TEAM

APPLICABLE CODES

FIRE PROTECTION/LIFE SAFETY APPROACH

- General Description
- General Fire Resistive Construction Aspects
- Occupancy Classifications
- Fire Resistive Separations
- Doors and Windows
- Interior Wall, Ceiling and Floor Finishes
- Decorative Structures within Buildings
- Egress
- Special Design
- Emergency Signage
- Suppression Systems
- Fire Department Access
- Fire Detection and Alarm System
- Emergency Communication Systems
- Smoke Management Description
- Central Control Station
- Emergency and Standby Power

Elevators

ACCEPTANCE TESTING

PERIODIC OPERATION AND MAINTENANCE

CONCLUSION

The AHJ will attend Schematic Design meetings and workshops, and discuss structural fire issues with the project team. Within 7 to 10 working days of its submission the AHJ must provide the team his or her comments about the Schematic Design, including any decisions and special requirements related to fire protection and life safety for the project.

During the Conceptual Design phase working drawings and specifications must be submitted to the AHJ for review. The AHJ verifies that the decisions and special requirements included in the Schematic Design phase have been incorporated. The Fire Safety Plan must demonstrate how the drawings and specifications comply with the NPS requirements.

The AHJ will respond to the Conceptual Design drawings and construction documents within 20 working days of receiving them.

Final construction documents must be submitted to the AHJ for review. At this time, certification must be indicated on the drawings provided by the contractors Fire Protection Engineer that the drawings and specifications are in compliance with NPS Structural Fire requirements.

The AHJ has 20 days to respond to the construction documents after receiving them. When codes are unclear or do not seem to appropriately address fire protection issues, the AHJ is authorized to make determinations called “AHJ Decisions.”

Changes/corrections to plans will be forwarded to the AHJ for review and approval. These decisions shall be documented in the Fire Safety Plan.

When the AHJ is satisfied that fire and life safety code requirements are met and a reasonable level of fire protection is provided, the AHJ will communicate approval. This communication shall be in writing; verbal approval is only permitted when the project is extremely time-sensitive. In this case, all verbal communication must be documented by the AHJ and followed with a written statement by the AHJ within 10 working days.

The AHJ (or designee) shall be informed of all Pre-Construction Meetings that address issues of site fire safety. NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations* and OSHA 1926.150–155 will be the primary references for fire safety requirements during construction.

Smaller-Scale Projects

Small projects for new construction, renovation or fire detection and suppression systems are often planned. These also require the AHJ involvement to ensure that a reasonable level of fire protection is provided. Since small project plans are often simple, they may be submitted with brief descriptions and sketches. Project managers can obtain initial comment and request additional plan reviews by contacting the AHJ. The AHJ shall respond within 10 days of receiving the documents.

Existing Structures

Buildings changing from one occupancy classification to another require Fire Safety Plan review and approval by the AHJ. Buildings undergoing a change in occupancy must have both automatic sprinkler system protection and automatic fire detection. See section 1 of this *Reference Manual.*

Any construction to modernize or renovate a structure shall not diminish the fire safety features of the facility below the level(s) required for new construction.

Any type of alteration (renovation, modification, reconstruction, or addition) requires the review and approval of the AHJ to ensure that it meets NPS requirements. Alterations may provide opportunities to correct fire safety deficiencies, especially in older buildings. Any building undergoing alteration must have automatic sprinkler system protection and automatic fire detection installed, if they are not already in place and in good working condition. See section 1 of this *Reference Manual*

Inspections

Pre-Occupancy Inspections

Both the AHJ and the Fire Prevention Office shall conduct pre-occupancy inspections for:

- New construction.
- Renovations that alter fire prevention or life safety features.
- Changes in a building's occupancy classification.

Based on the inspection findings, the AHJ and/or FPO inspector will recommend occupancy of the space, or identify corrective actions needed to bring the space into a safe condition prior to occupancy.

Three copies of documents describing testing procedures of all active fire protection systems must be submitted to the AHJ at least 30 days prior to final testing. These include:

- Sprinkler system.
- Standpipes.
- Fire pump.
- Fire alarm system.
- Emergency power generator.
- Emergency lighting.
- Smoke control.
- Security system interface with other systems.

These systems shall be fully functional and tested by the installing contractor BEFORE the AHJ is notified of the acceptance test. The AHJ shall be notified 5 working days before the acceptance test, and the AHJ (or their designee) must witness the test. If the systems are not ready for inspection when the AHJ is notified then the contractor must stand the costs of any subsequent inspections.

Building Inspections

Fire Protection Condition Assessment (FPCA)

This is a comprehensive fire and life safety building inspection. This assessment requires a fire protection engineering level of knowledge to conduct and includes costing of the identified deficiency to be entered into FMSS. This assessment is to be conducted on all structures that pose a “high risk” to persons or contents if fire were to start in the structure

Annual Fire Prevention Inspections

The Park Structural Fire Coordinator is required to schedule annual fire inspections in all NPS and concessions facilities. These inspections must be documented on the NPS Annual Fire Prevention Inspection Form, or another approved form. More frequent inspections may be conducted if the AHJ or Park Structural Fire Coordinator determines there is an increased level of risk or hazard.

The Park Structural Fire Coordinator schedules follow-up inspections as needed. Any deficiencies must be noted at the time of the inspection and forwarded to the proper supervisor, Park Safety Officer, and the Park Facilities Management Division for correction.

For concessionaire facilities, deficiencies will be forwarded to the Regional Structural Fire Management Officer, park unit's concessions manager, the concession's Fire/Safety/Security Manager and to the park unit's and Regional Division of Business and Revenue Management.

Housing Inspections

The Park Structural Fire Coordinator, or housing manager, must assure the inspection of all NPS housing annually, to verify the existence and condition of fire extinguishers and smoke detectors and identify basic fire safety deficiencies. These will be documented on the NPS Annual Fire Prevention Inspection Form or another approved form. Deficiencies must be reported to the resident of record, who is responsible for correcting any identified housekeeping deficiencies, which pose a fire hazard. The inspection results are also forwarded to:

- The Park Structural Fire Coordinator.
- The Park Housing Officer.
- The Park Facility Manager.

Fire Protection System Checks

The inspection, testing and maintenance of fire suppression and detection systems will be conducted according to NFPA standards. Written documentation of these tests and their results must be maintained by the Park Structural Fire Coordinator.

Wildland Urban Interface Inspections

The Park Structural Fire Coordinator and the Regional or Park Wildland Urban Interface (WUI) Coordinator shall jointly conduct wildland urban interface fire safety inspections. These inspections apply to both government and privately owned structures within a Park, that are deemed a wildland fire risk (either from or to) the neighboring park and/or private lands. If a WUI coordinator is not present in the park the Park Structural Fire Coordinator should arrange to have these inspections done through the appropriate NPS Regional office.

Permits and Fire Safety During Construction

"Hot Work" is the term for maintenance and construction-related tasks that involve any burning, welding, brazing, grinding, roofing, or open flame. Before any welding, cutting, or open flame operation begins, the job supervisor or operator must contact the Park Structural Fire Coordinator to request a Hot Work Permit. None of these tasks are permitted in a facility when its automatic fire detection and suppression systems are out of service.

During construction and renovation projects, a building's automatic fire detection and suppression systems must only be removed from service to the extent required to accomplish the work. Once the work requiring the systems to be removed from service is completed the systems shall be returned to service immediately, even when the facility is unoccupied. If this is not possible, the contractor/user must post a fireguard for 24 hours after welding, cutting, and open flame operations in facilities, or certify in writing that the facility is fire safe. The PSFC must be notified any time a system is removed from service and again when it is returned to service.

Sprinkler systems shall not be removed from service during welding, cutting, or open flame operations unless the work is being performed directly on the sprinkler system.

In areas under renovation, or when additions are made to existing facilities, the fire detection shall be extended into the work area. Heat detection is recommended.

- When tar kettles are used, contractors shall follow these rules:

- Tar kettles shall not be operated on the roofs of buildings. Instead, the material must be pumped to the roof from ground level.

- Do not transport roofing kettles with open flames.

- The use of any solid fuel or flammable liquid with a flashpoint under 100 degrees Fahrenheit is prohibited.

- At least one 20-pound dry chemical fire extinguisher shall be located within 30 feet of the tar kettle.

- Mops and other tools used for application of roofing materials must be stored away from buildings and combustibles.

Fire Protection Procedures for Contractors, Subcontractors, Concessionaires and Vendors

In addition to the tar kettle rules, the following mandates apply to all contractors, subcontractors, concessionaires, and vendors doing work or conducting business in any National Park:

At least one serviceable 10-pound ABC dry chemical fire extinguisher shall be kept in the following locations:

- On each floor of a building, near a usable exit or stairwell.
- At each tool shed.
- At any construction trailer(s).
- In all storage areas.

Extinguishers shall be provided and maintained by the contractor.

The contractor or a representative must be responsible for on-site fire prevention for all facilities under the contractor's control. This person shall be readily available to meet with Park employees and be responsible for implementing the Park-approved fire prevention program. The contractor shall brief any employees and subcontractors about the fire prevention program, reporting procedures, and the use of fire extinguishers.

Smoking is prohibited inside all NPS facilities and in any hazardous area. During renovation or construction, contractors and their employees may smoke only in designated smoking areas.

The contractor must inform the PSFC and Park Safety Office about the location, use, and storage of all hazardous materials. The material safety data sheets (MSDS) for these items shall be maintained on-site and readily available.

Any cabinet or locker used for storage of tools or materials shall be constructed of noncombustible material when placed inside of, or within 30 feet of, a building.

Only Underwriters' Laboratories (UL) approved electric, gas, or oil space heaters shall be used for space heating during construction, and only when an ample clearance is provided—a minimum of three (3) feet—from any combustible materials. All portable space heaters shall be equipped with a "tilt switch," which shuts the heater off if it is overturned.

Open flame heaters are not recommended, and their use requires the advance approval of the Park Structural Fire Coordinator.

Trash Disposal

All trash and demolition-related materials must be removed from the facility at least once daily, and must be disposed of in accordance with the project's Statement of Work. No debris will be disposed of on-site by burning.

Temporary Enclosures

During construction, only flame-resistant or non-combustible materials can be used to enclose or separate areas of facilities. These materials shall be secured to prevent them from falling or being blown against heaters or other ignition sources.

Temporary Wiring

The provisions of *NEC 70* apply to temporary electrical power and lighting.

Storage, Use and Handling of Flammable/Combustible Liquids

Transporting flammable liquids in open or unapproved containers is prohibited.

Empty containers used for Class I flammable liquids shall be kept tightly covered or properly vented.

Flammable liquids or hazardous materials shall never be poured or drained into manholes, sewers, or drainage ditches.

Flammable or combustible liquids shall never be used for cleaning purposes.

Flammable or combustible liquids shall be stored only in approved safety containers, in well-ventilated areas, out of direct sunlight, high temperatures and away from sources of ignition. Flammable liquid storage lockers, cabinets and containers shall comply with NFPA 30, Flammable and Combustible Liquids Code.

Access for Firefighters

Contractors shall provide access to their worksites for the safe and efficient use of firefighting equipment in case of emergency. This includes:

- Clearance around fire hydrants.
- Full access to Fire Department connections.
- Fire lanes on roadways must be kept clear.

- Building stairwells and corridors must be kept clear.

- Keys to all locking mechanisms that secure the site.

Water Supply

Water supply and delivery systems shall be designed and maintained to provide sufficient water to operate fire sprinkler systems and fire hydrants for fire protection operations.

Hydrants

The use of fire hydrants for any purpose other than fire protection is prohibited without prior approval of the PSFC. Fences, barriers or equipment will not obstruct hydrants. Vehicles shall not park within 15 feet of any fire hydrant.

The PSFC shall be notified prior to any proposed water outage that may affect hydrants or sprinkler systems.

The contractor shall place “Out of service” signs on any inactive hydrant, and shall remove the sign immediately upon the hydrants return to service. The contractor shall perform a flow test, in the presence of the AHJ or his/her designee, on all new hydrants or hydrants returned to out of service once that hydrant is ready for activation.

Under no circumstances will interior fire attack be performed using hoses that are directly connected to hydrants.

Fire Pumps

The Inspection, Testing and Maintenance (ITM) shall be in accordance with NFPA 25.

Standpipes

A standpipe is a high vertical pipe or reservoir that is used to secure uniform pressure in a water supply system. Standpipes are to be used only by properly trained and equipped personnel. Standpipes shall be inspected, tested, and maintained in accordance with NFPA 25.

Exterior “Hose Houses”

Exterior Hose Houses, when authorized by the AHJ, shall be used for exterior fire suppression operations only, and only by trained, qualified personnel. Availability of

water at a sufficient pressure, along with the ability to meet the following requirements, will dictate whether the hose house is a valid option for exterior fire suppression:

- Hose house design must meet the NFPA 24 standards.
- The hose house must contain the required tools (hydrant/spanner wrench, hose straps, etc.), correctly stored and serviceable.
- Inspection requirements for hose houses must meet the NFPA 25 inspection rules.
- Hose testing is performed at least once a year, in accordance with NFPA 1962.
- Nozzles must meet the requirements of NFPA 1964. They must be adjustable (not automatic) for a 1.5-inch hose, capable of flowing 95 gallons per minute (gpm) at 100 pounds of pressure per square inch (psi).
- The maintenance, repair or use of any hose house must be documented in writing and kept on file with the Park Structural Fire Coordinator.

Section 5 - FIRE EXTINGUISHING SYSTEMS

In many cases, a combination of manual and automatic systems may be used to provide fire protection.

Manual fire protection relies on the response of trained personnel to use fire extinguishers or a fire engine company to use fire extinguishers and hose streams to suppress a fire.

Automatic fire protection consists primarily of sprinklers or other specialized extinguishing systems. These systems consist of a network of pipes, with nozzles or "heads" to spray water within the protected area. A properly designed and installed sprinkler system is intended to prevent a fire from spreading and, in some cases, may extinguish the fire before the fire department arrives to begin manual fire suppression. Typically, a sprinkler system will result in much less water damage than manual suppression, simply because of the amount of water used in manual suppression.

Automatic Extinguishing System Types

Sprinkler Systems

There are four basic types of automatic sprinkler systems: wet, dry, pre-action, and deluge.

Wet Pipe – This is the simplest and easiest type of system to maintain. The piping in a wet pipe system is always filled with water to all of the heads. The system operates as each individual head is activated when it is exposed to the heat from a fire. Heads that are not exposed to the fire's heat do not activate and, therefore, do not discharge any water.

Generally, the wet pipe system cannot be exposed to freezing temperatures. Where freezing temperatures may exist in a portion of the protected area, dry head assemblies could protect that area—provided the wet pipe leading up to the heads remains in a heated area. Another option would be to use an antifreeze solution in the piping exposed to freezing temperatures.

Dry Pipe – Where the system may be exposed to freezing temperatures, a dry pipe system should be used. It is similar to a wet pipe except the piping is filled with compressed air. The air holds a check valve closed. When a head (as in the wet pipe system) is activated due to the heat from a fire, the air is released and the valve opens, allowing water to flow out of the head. This system is more prone to corrosion than a wet pipe and slower than a wet pipe to deliver water, thus allowing the fire to grow larger before suppression starts.

Since the dry pipe system is more complex, there are also more maintenance and space requirements. The system is dependent on air pressure to hold the dry pipe valve closed. If air pressure is lost, the system fills with water and the system must then be properly serviced.

Pre-action – This is also an option in areas where the piping system may be exposed to freezing temperatures, or where there is fear of the sprinklers being damaged. A pre-action system is similar to a dry pipe except that two independent actions are needed to discharge water.

First, a separate detection system (heat or smoke detectors) has to activate to allow water to fill the piping system. Then, each head operates individually when exposed to the heat of a fire. If the detection system fails to operate (perhaps because of a power or system failure), water will not fill the piping system. This system delivers water in about the same time as a wet pipe. More maintenance is also required with this system than either the wet pipe or dry pipe systems.

Deluge – A deluge system is often used where exposure protection is required or where fast-moving fires are expected, that may spread faster than individual sprinkler heads may operate. All of the sprinkler heads open and they all spray water at the same time. These systems can be activated by either automatic or manual means. The hardware required for this system is similar to the pre-action system.

Special Extinguishing Systems

These specialized systems may be used in conjunction with sprinkler protection. They use agents that include water mist, gas, and chemicals to suppress fires and smoke. The use of these special systems must be approved by the AHJ, as they require considerably more maintenance and testing than other sprinkler systems.

Water Mist – The water mist system uses unique high-pressure components, installed in accordance with NFPA 750.

Gaseous – The gaseous agents are FM-200 (Halon® replacement), Inergen®, and carbon dioxide. These all require airtight compartmental enclosures to be effective in extinguishing a fire. They are installed in accordance with NFPA codes.

Commercial Kitchen System

Wet Chemical – All ventilation hoods in commercial kitchens must be protected with a wet chemical fire extinguishing system. They shall be installed in accordance with NFPA documents. Kitchen hoods must be regularly cleaned and inspected to ensure proper ventilation and the effectiveness of the fire extinguishing system.

Dry Chemical – The dry chemical agents are mainly useful for surface fires, caused by flammable liquids. They are installed in accordance with NFPA codes.

Fire Extinguishing System Shop Drawings

These must be:

- Prepared by a National Institute for Certification in Engineering Technologies (NICET) III or Professional Engineer.
- In accordance with the appropriate NFPA code or standard.
- Reviewed and approved by the AHJ before installation.

Portable Fire Extinguishers

Fire extinguishers provide a manual method to extinguish small fires. They are necessary part of the fire protection even if the building is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment.

In Park structures, portable extinguishers shall be located, installed, and tested in accordance with NFPA 10. They must be conspicuously located where they will be readily accessible and immediately available in the event of fire, and be of the class for the type fire most likely to occur.

All Park personnel expected to use extinguishers shall receive hands-on fire extinguisher training within 30 days of assignment. This includes NPS, concession, and tenant organizations. All Park personnel must receive annual refresher training, either hands-on or by watching a video program. Extinguisher training must be documented on a sign-in sheet maintained by the Park Supervisor.

Only personnel designated and properly trained are authorized to use fire extinguishers. Training aids and videotapes, which meet OSHA requirements for fire extinguisher use, are available from the Regional Structural Fire Management Officer.

Fire extinguishers shall be inspected, maintained and tested in accordance with NFPA 10. A monthly visual inspection of each fire extinguisher must be performed and documented in writing. For vehicles and support equipment whoever routinely uses the equipment is responsible for inspecting the fire extinguishers located onboard.

The following types of fire extinguishers are considered obsolete and shall be removed from service:

- Soda acid.
- Chemical foam (excluding film-forming agents).
- Vaporizing liquid (carbon tetrachloride).
- Cartridge-operated water.
- Cartridge-operated loaded stream.
- Copper or brass shell tanks (excluding pump tanks) that are joined by soft solder or rivets.

*The installation of new Halon® fire extinguishers or extinguishing systems is illegal. Existing Halon® systems and extinguishers can continue to be used as long as they are properly inspected, tested, and maintained.

Organizations or personnel shall not purchase, install, or relocate fire extinguishers without the prior approval of the PSFC. The type and classifications of portable extinguishers to be used in the Park must be approved by the PSFC before being purchased.

Section 6 - FIRE ALARM SYSTEMS

A complete fire alarm system consists of the following functions:

- Initiation - provides an input signal to the alarm system.
- Notification - advises that human action is required in response to a particular condition.
- Control - creates the output that controls the automated fire protection systems and/or equipment.

Fire alarm systems are installed to protect people and property. They must be installed properly, tested, and maintained to ensure that they operate in accordance with NFPA 72, National Fire Alarm Code.

Fire Detection Systems

Fire detection systems connect the building fire alarm control panel(s) to a central station, fire department or park dispatch center. The systems may be digital, telephonic, radio, or supervised conductor types. They must be compatible with existing central station equipment.

Applications

The building fire detection systems must be connected to the fire alarm reporting system as a means to report fires (either automatically or manually) to the occupants of a building and a central alarm location so that firefighting operations or other emergency action may begin.

Requirements

Fire detection systems must conform to NFPA 72, *National Fire Alarm Code*, and NFPA 70, *National Electric Code.* The system must transmit coded signals to a fire department and/or other central location(s), and these signals must contain the following information and/or features:

- Permanent record of alarm signal, time, and date.
- Automatic supervision of alarm-initiating circuits.
- Automatic conditioning for transmission of signals under line fault conditions or signal ground, single open, or both.

- Automatic testing of radio signaling devices.

- Transmitters that are UL listed and approved for use with the existing central reporting system.

Fire Alarm Notification and Evacuation Systems

Applications

Fire alarm evacuation systems must be provided in buildings as required by NFPA 101, and in buildings equipped with automatic detection or suppression systems.

Requirements

These systems consist primarily of initiating devices and devices to notify the building occupants, and the fire department.

- Automatic alarm-initiating devices (such as detectors and water flow alarms) must be connected to these systems when provided.

- Fire alarm systems must be connected to a central alarm location, fire department, or alarm monitoring location.

- Fire alarm systems may be connected to security systems or an EMCS for monitoring purposes only; but they must not rely on any components of the other systems for operation.

- Placement and installation of manual alarm activation and audiovisual warning devices must meet the requirements of the *Uniform Federal Accessibility Standard* (UFAS) and the *Americans with Disabilities Act* (ADA).

Automatic Fire Detection Systems

Applications

Automatic fire detection systems must be provided in all areas requiring fire detection by NFPA standards, NPS policy, and where required by the AHJ.

Requirements

- Fire detection systems must conform to the applicable provisions of NFPA 72, the UFAS and the ADA.

- Detection systems must be designed and installed to alert building occupants and to transmit a signal to a constantly attended location.

Detection Systems and Ceiling Fans

Areas with ceiling fans (de-stratification fans) may require additional smoke detectors for the area being protected. This caution does not apply to heat- or flame-detection devices, or to residential occupancies. When ceiling fans are used, the area of protection for smoke detection devices permitted by NFPA 72 must be reduced by 50 percent.

Plans for Fire Alarm Systems

The plans and calculations for fire alarm systems must be prepared and submitted for AHJ approval before any equipment or wiring is installed. These plans, known as “shop drawings,” must be prepared by:

- A certified professional Fire Protection Engineer, or...

- An individual who has obtained National Institute for Certification in Engineering Technologies (NICET) Fire Alarm Systems, at a minimum Level III certification, in accordance with NFPA 72.

Shop drawings submitted include the building’s fire alarm reporting system, fire alarm evacuation system, and automatic fire detection system. They are submitted to the appropriate Park or Regional office, and/or the AHJ. At a minimum, shop-drawing submissions must include these details and/or recommendations:

- Floor plans.

- Locations of all alarm initiation and notification appliances.

- Alarm, supervisory, and trouble-signaling equipment.

- Annunciation equipment.

- Power connections.

- Battery calculations.

- Conductor types and sizes.

- Calculations of voltage drops.

- Recommended manufacturers of the equipment, including model numbers and UL listing information for the equipment, devices and materials.

- Details of ceiling height and construction.

- An explanation of the interface of fire safety control functions.

- Off premises communications equipment

Inspection, Testing, and Maintenance (ITM)

Upon complete installation of all fire alarm systems and any related equipment, the system shall be subject to a 100 percent acceptance test. The contractor shall test and confirm the proper operation of all initiating and notifications devices prior to scheduling an acceptance test with the AHJ or his or her designee.

Fire alarm systems must be installed—then regularly inspected, tested, and maintained—in accordance with nationally recognized standards, engineering guidelines, practices and timelines that are approved by the AHJ. Records of these tests and any related maintenance must be made in writing and kept on file by the Structural Fire Coordinator for the Park.

Section 7 - SCOPE OF WORK FOR PROJECTS

Most projects within the NPS involve a "Scope of Work" statement and a Task Order. The intent is to ensure that the project is successfully completed in a timely, cost effective and professional manner.

Fire protection projects deserve particular attention, to ensure that all aspects meet the needs of the Park and that the small but important operational details are not overlooked. The Park Structural Fire Coordinator (PSFC) should be made aware of all anticipated fire protection projects to ensure his or her input. If the PSFC does not have the expertise or qualifications for a specific project, additional assistance or advice shall be sought from the Regional office.

Minimum Content

At a minimum this written statement should contain:

- A description of the project, with some background information.
- A timeline that outlines completion of the various steps.
- The level of effort expected of the contractor(s).
- The specific deliverables.
- The number and nature of meetings involved.
- Names of technical contacts.
- Lists of government-furnished materials.

Several of these items are key to the successful completion of the project:

Project Description and Background

This is probably the most critical portion, where detailed attention is required. The person writing the Scope of Work statement must not overlook seemingly small items that may have a monetary or other long-lasting affect on the project's overall viability.

Timeline

The start and finish dates should be realistic. They may be influenced by many factors, including the project's size, workforce availability, time of year, and Park operations.

Deliverables

This portion of the Scope of Work must include an identification of existing conditions. An inspection report should be required before the design process begins. The project's progress must be monitored through the contractor's regular submission of review documents, drawings and specifications, which should be included in the timeline.

Name(s) of Technical Contact(s)

The need for technical or other expert assistance specific to fire protection must be included in the Scope of Work. Guidance and input from a fire protection specialist is important, especially in the early stages of many projects. Failure to clarify this need with the contractor may unnecessarily delay or compromise the project. The names of all technical experts must be listed in the document.

Section 8 - AGREEMENTS AND CONTRACTS

Parks should develop agreements with local agencies and fire departments to meet their mutual needs. Drafts of all agreements and contracts for fire services shall be submitted to regions and, where appropriate, to field solicitors for review before they may be implemented. The authority to enter into interagency agreements is extensive and can be found in:

- *Director's Order 20*, Chapter 2 – *"Federal Assistance and Interagency Agreements Guideline."*

- Departmental Manual 620 (DM-620).

Director's Order 20 also provides detailed instructions and formats for developing agreements. Agreements fall into the following categories:

Mutual Aid Agreements

A Mutual Aid Agreement is made jointly by more than one party. As its name implies, it is used primarily for areas in which a Park can assist a local department (a fire department, for example) and in turn, the local department also assists the Park.

The agreement should lead to positive interaction among the participating parties, by covering areas of beneficial interaction other than crisis operations. The agreement should also address cooperation and coordination in Structural Fire Management Programs. In addition to the specific requirements of *Director's Order 20*, the agreement shall address the following:

- Cooperation in fire prevention, preparedness and suppression, and management operations.

- Coordinating the development of Structural Fire Management Plans, including management strategies, tactics and methods.

- Clear identification of parties responsible for implementing various aspects of the agreement.

- Guidelines for resolving differences in training standards for fire suppression.

- Establishment of joint training and exercises.

- Procedures for notification, initial attack, and transition into more complex incidents.

- Fire operations specific to suppression, salvage and overhaul at historic structures and curatorial facilities.

- Incident management responsibilities, including unified command within the ICS framework, and resolution of command responsibilities in particular situations.

Any agreement that obligates federal funds or commits anything of value must be signed by the appropriate warranted contracting officer. Specifications for funding responsibilities shall include billing procedures and schedules for payment.

All Mutual Aid Agreements must receive an annual review, as well as a full joint review by all parties at least every 5 years and as appropriate for revision. All agreements must be subject to an appropriate legal review before they are finalized.

Contracted Protection

When a Park does not have its own engine company and relies totally on a local fire department, an agreement for "Contracted Protection" may be used. Contracts may be negotiated where they are determined to be the most cost-effective means for providing the best possible fire protection that meets NPS established standards. A contract, however, does not absolve the Park Superintendent of the responsibility for creating or managing the Park's own Structural Fire Management Plan. A valid park SFMP must be in place at all times, and must include a definition of the contractor's role in the overall program.

Contracted Protection Agreements shall be developed and administered in accordance with Federal Acquisition Regulations. The contracts should cover items such as:

- Pre-incident meetings.

- Amounts to be paid for the protection, including whether it is a single, annual payment for all incidents, a payment "per incident," or some combination of these.

- Any special needs the Park has, such as protection of collections, historic structures, etc.

- Notification procedures.

Local Protection

Park units may be located within an established fire department response area, such as a city or fire district, making it unnecessary for a separate, specific contract. This does not eliminate the need for proper pre-incident planning and communications with the applicable department. The responding units must be aware of any special needs and concerns that the Park may have. These needs and concerns shall be communicated before an emergency situation ever arises, and must be kept current.

Issues that must be clearly understood are:

- How the local fire department handles responses on federal lands.
- How the Park will be billed, if necessary.

If the department is going to bill the Park then a Contracted Protection Agreement is required.

Emergency Assistance

A city, county or rural fire department or emergency medical team may have a policy in place that allows them to render assistance in case of a fire on federal property. A federal law allows reimbursement for costs that a local fire service entity incurs during operations on federal property. See 44 CFR 151, or look on the Internet at http://aspe.hhs.gov/cfda/P83007.htm.

A Park may also use its own personnel to render emergency fire or rescue assistance outside the National Park Service system. The regulations that permit this are 16 USC 16-1 (part of the Act of August 8, 1953) and DM 620. NPS personnel assigned "arduous" or qualifying "hazardous duty" fire or rescue assignments off park property, must meet the same physical fitness standards that they would if the incident were on park property.

NOTE: Some state and local fire departments will not provide assistance to neighboring jurisdictions without a completed written agreement. The need for such an agreement must be determined and addressed long before a Park requires emergency services.

Sample agreements can be found in Appendix B.

Section 9 – CONTENT OF THE STRUCTURAL FIRE PROGRAM REVIEW

A good Structural Fire Management Plan (SFMP) for a National Park should meet both the NPS mission and the Park's own fire prevention objectives by:

- Identifying and evaluating the many factors that create the structural fire workload at the Park.
- Identifying staffing needs and evaluating organizational needs.
- Providing guidance for position management planning.
- Providing a framework for budgeting and project requests.

The starting point for the SFMP is the regional Structural Fire Program Review (SFPR). The SFPR is conducted for the Park Superintendent. It requires that he or she consider all the elements necessary to determine structural fire needs as they pertain to:

- Personnel.
- Equipment.
- Policies and procedures.
- Mutual Aid and support requirements.

The review examines a number of documents and other data to provide some evaluative consistency on a regional and Service-wide basis. It includes the following items, as well as other known characteristics of the Park unit.

- Any available statistics about Park infrastructure.
- Cultural resource inventories.
- Historic and mission-critical structures.
- Maintenance information and backlogs.
- Geography and topography of the Park.

The SFPR must also contain a comparison of the original intent of the Park's existing structural fire program, versus the program's current condition. The components of the SFPR are identified in *Director's Order 58*:

- Structural fire management planning.
- Safety and health.
- Structural fire suppression.
- Structural fire prevention.
- Structural protection from wildland fires.
- Cultural resources.
- Natural resources.
- Concessions.
- Reporting.
- Investigation.
- Training, qualification, and certification.
- Interagency coordination.
- Park program review.
- Preparedness.

Service-wide Program Direction (NPS Policies)

Fire prevention, protection, and suppression are, and will continue to be, primary considerations in the design, construction, rehabilitation, maintenance, and operation of all National Park Service facilities. The Structural Fire Program is an important tool in carrying out the NPS mission. The objectives of the program are to:

- Supplement the structural fire policy articulated in the *National Park Service Management Policies.*
- Set forth the operational policies and procedures necessary to establish and implement Park-based Structural Fire Management Programs (SFMPs).

Structural fire prevention, protection and suppression are characterized by high risks, inherent dangers, and high visitor and concessionaire expectations, they must be implemented and performed in a professional manner. The program will be managed in accordance with all applicable laws and regulations, and *DO/RM-58*.

The Service has authorized the designation of certain employees as Structural Fire Management Officers, with the responsibility to "…maintain law and order and protect persons and property within areas of the National Park System."

Park Superintendents will manage structural fire activities as part of a comprehensive interdisciplinary effort to protect resources and promote the safe and appropriate public enjoyment of those resources.

Park-Specific Program Details

Park Description

This section of the SFPR should be a concise but descriptive summary of the Park. The Park's enabling legislation, the GMP or resource management plans, and even the Park's brochures are excellent sources for the information in section. Suggested items to cover are:

- The Park's purpose (enabling legislation language) and subsequent relevant legislation.
- Significant management issues that relate to structural fire.

Usage Trends

This section summarizes visitation patterns and Park usage trends that would be expected to impact the dynamic fire loads, infrastructure demands, and life safety criteria. Suggested topics:

- Structure fire history (numbers, dollar loss to government property).
- Number of water-based fire suppression systems.
- Number of fire detection systems.
- Locations and occupancy loads of overnight facilities.
- Closest municipal and/or volunteer fire department(s), response times, staffing levels, types of equipment.

- Inventory of historic and/or mission-essential structures.
- Infrastructure capabilities (water storage and delivery methods, fire main size, water pressures).
- High hazard and special use structures.
- Encroachment by heavily traveled highways and thoroughfares used by railways or tractor-trailers.
- In-holdings or leaseholder-occupied communities.
- Frequent confined space operations.
- Active “Hot Work” safety programs.

Public Use

In addition to numbers, the SFPR should detail the types of user groups that visit the Park. This may include summarizing information about:

- Overnight campsites (with and without fire circles).
- Marinas and boat launches.
- Compressed gas filling stations.
- Off-road vehicle use.
- Personal watercraft use.
- Aircraft landing strips or airport proximity.
- Rock climbing.
- Theaters.
- Schools and day care facilities.
- Hospitals and medical facilities.
- Restaurants and dining facilities.

Community Expectations

This is a brief summary of the Park's interrelationships with nearby communities and how these may affect the Structural Fire Program. Describe the relationships with local communities in these terms:

- What are the expectations regarding the Park's ability to assist in fire suppression in their communities?
- What does the Park do in terms of fire prevention education and outreach in these communities?
- What is the Park's expectations regarding each community's ability to provide firefighting assistance if necessary on Park property?

Cooperative Assistance

This section describes cooperative agreements for fire protection between the Park and other agencies. It should include details of:

- Any existing Memorandum of Understanding (MOU) with local, state, and federal agencies.
- Cooperative Agreements with local fire agencies, including dispatch operations and emergency medical services.
- The involvement of local fire agencies inside the park: how often these agencies provide "first responding unit" status, suppression and detection activation (whether legitimate, false alarm, or malfunction), backup or emergency response. Be sure to include time frames.
- The involvement of the Park's structural fire crews outside the Park.

Protection of People

This section describes fire and structural life safety, and visitor and Park employee protection. Issues to address here include:

- Has the Park taken adequate steps to ensure that outstanding life safety deficiencies have been mitigated, corrected, or addressed?
- Has the Park taken adequate steps to ensure that outstanding fire deficiencies have been mitigated, corrected, or addressed?

- Is there an active, ongoing, and code-compliant fire suppression and detection system? Is it being inspected, tested and maintained according to code and NPS standards?

- Is there a fire safety awareness program in place to educate Park and concessionaire employees, their families, and the public?

- Are all structures, as described in *RM-58*, being inspected for fire and life safety deficiencies, at least, on an annual basis?

Protection of Resources

This section describes potential threats to cultural resources, historic and mission-critical structures within the Park. It requires descriptions of:

- Each of the cultural resources, and historic or mission-critical structures.

- The types of potential threats to these resources and structures.

- Any "internal" threats to resources—for example, an inadequate inspection, testing and maintenance program for the fire prevention systems.

- The nature of the relationships between Interpretation, Resource Management, Maintenance, senior staff members, and the Structural Fire Management Program—for instance, could the program be taken more seriously? Could someone research better types of technology to update portions of the program? Has the staff gotten complacent because there have not been fire-related incidents in a while?

Engine Company Operation

This section describes the Park's fire engine company—its capabilities, reliability, vulnerabilities, and overall effectiveness. It includes a thorough analysis of:

- Staffing.

- Equipment (the condition and appropriateness of engines, trucks, tenders, power tools).

- Personal protective equipment (the condition and appropriateness of turnouts, self-contained breathing apparatus, fit testing, oxygen sampling, personal alert safety systems).

- Training (both initial certification and ongoing programs).

- Pre-fire planning.
- Standard operating positions.
- Physical and medical standards for firefighters.

Special Needs

This section would describe infrequent events that occur in or near the Park that may require special permitting or staffing while underway—a description of anything that may require a fire watch, or impact the Park's structural fire workload.

Current Staffing and Support

This section should summarize the current staffing and support and assess its basic effectiveness. This means listing and/or explaining:

- Current staffing and position management arrangement and its effectiveness.
- Does required occupancy of housing exist?
- Does the current staffing level address structural fire safety concerns?
- Are there adequate dispatch services, including the means to contact other agencies for structural fire help?
- What is the current support level – vehicles, standard equipment, travel, training, etc.?

Recommendations

This section details the Park Supervisor's recommendations, based on the analysis of the Needs Assessment, for structural fire staffing and support. It may also include:

- Describe the needs for structural fire coverage.
- Has there been (or is there projected to be) new construction that would impact the current SFMP?
- Does the Park's level of activity or the inability for fire crews to train, lead to or contribute to skill erosion?
- Is cooperation with other agencies being used to its fullest extent to maximize the effectiveness of the structural fire program?

Operations Formulation System/Project Management Information System(OFS/PMIS)

The OFS/PMIS narrative is not a component of the Structural Fire Program Review, but should be a logical output of the Needs Assessment.

Section 10 - FIRE ENGINE COMPANY OPERATIONS

The methods, procedures, and equipment used to suppress, control, extinguish, investigate, and prevent structural fires shall be implemented in accordance with:

- *Director's Order 58* and this manual.
- 29 CFR 1910.156.
- The National Fire Protection Association codes and standards.
- International Fire Service Training Association manuals.
- The Park unit's Standard Operating Procedures.
- Any other codes, laws, and/or standards deemed appropriate by the AHJ.

Participants of the "Volunteer in Park" programs shall not participate in any hazardous duty activities, in accordance with *Director's Order 7*.

Fire Engine Company Standard Operating Procedures

Parks with engine company operations shall develop a written set of Standard Operating Procedures. These procedures must describe, in detail, the various operations and policies that the engine company may be required to perform or implement. They may include, but are not limited to:

Operations	**Policies**
Confined space entry	Physical and medical standards
Interior fire attack	Incident reporting
Exterior fire attack	Equipment maintenance
Vehicle fires	Personal protection ensemble
Hazardous materials response	Structure of organization
Emergency medical response	Vehicle operation standards
Wildland Urban Interface (WUI)	"Two-In, Two-Out" (interior attack)
Set-up of Incident Command System	Infectious disease control

Some of these topics are discussed further in this section of the manual.

Fire Engine Company Staffing

Only personnel, who have been trained in accordance with RM-58 and certified to perform assignments under supervision of agency authorized supervisors, shall be authorized to respond to and perform functional assignments at the scene of a fire/emergency incident. Qualified personnel may be designated to complete delegated supervisory assignments in the process of managing incident assigned resources and in the reduction of incident related impact to life, property and the environment. Personnel will only perform assignments within the scope and extent of their level qualification and certification.

Incident assigned personnel will not engage or deploy to perform any emergency function until it is confirmed that all appropriate personal protective equipment has been secured and is in use and that radio communication is established and immediately available for the duration of the assignment. Personnel assigned to the supervisory capacity are accountable for all assigned resources. The ICS "T" Card System or like system, shall be utilized as the agency's accountability system. An engine company **will not engage** in fire suppression operations with less than the following trained and qualified personnel:

Position	Number Required
Fire Officer	1
Driver/Operator	1
Fire Fighter	2

To maintain minimum 24/7 staffing levels and to meet the above requirement, the following 12 positions are recommended for each fire district.

Position	Number Recommended
Fire Officer	2
Driver/Operator	2
Fire Fighter	8

All individuals in these positions must have successfully completed the required National Park Service Structural Fire Training Course(s), see Section 12 or this manual, or an equivalent approved by the Structure Fire Training and Education Officer.

Fire Fighter Safety and Accountability

Fire Ground Operations

Structural fire suppression and fire rescue operations shall be considered appropriate under the following conditions:

- The Park's Structural Fire Management Plan lists structural fire suppression as a response duty of the fire engine company.

- All fire engine company members are currently trained to RM-58 standards.

- Self-contained breathing apparatus and protective clothing for structural firefighting is provided, and engine company personnel are trained and certified in their use.

- The fire engine company is capable of performing fire suppression actions effectively, using a minimum of:

  two 1 ½ -inch approved structural fire hose

  combination fog nozzles capable of delivering 95 gallons per minute (gpm)

- The fire apparatus being used to support initial attack operations shall be capable of flowing, at a minimum, 750 gpm (or 2850 Liters per minute), and must comply with the requirements of NFPA 1901 Pumper Apparatus.

- The "Two-In, Two Out" interior attack policy shall be complied with, in accordance with 29 CFR 1910.134. At least two firefighters trained, equipped, and available to provide effective rescue will be identified as Rapid Intervention Crew (RIC) and will be located outside the "Immediately Dangerous to Life and Health" (IDLH) atmosphere.

  One of the identified RIC firefighters is responsible to account for and, if necessary, initiate a firefighter rescue while firefighters are within an IDLH atmosphere.

  The other RIC firefighter may be assigned an additional role, as long as he or she is able to perform assistance or rescue activities without jeopardizing the safety or health of any other firefighters working at the location.

  The incident commander or designee must always be notified before the RIC firefighters enter the IDLH atmosphere to provide emergency rescue.

An important exception to these rules: If, upon arriving at the scene, firefighters find an imminent life-threatening situation where immediate action may prevent the loss of life or serious injury, the above requirements may be suspended. When such immediate action is necessary, the Emergency Command Center (ECC) must be notified. The ECC then notifies all responding resources that an entry is in progress. Responding resources shall provide the necessary rescue support and backup upon their arrival.

Confined Space Entry and Rescue and Urban Search and Rescue (USAR)

These types of operations must be undertaken in accordance with 29 CFR 1910.146, and any other codes, manuals and/or standards deemed appropriate by the local AHJ. This includes:

- Methods, procedures, and equipment used in confined space entries or rescues.
- Training and certification for people who perform confined space entry or rescues.
- The entry equipment with which they are outfitted.
- Their qualifications to perform appropriate air sampling and monitoring, and to construct adequate shoring.

Where applicable, warranted or mandated, personnel performing confined space entry and rescue, or USAR operations, shall be outfitted with personal protective ensembles and equipment that meet the minimum standards of 29 CFR 1910.146, and *National Fire Protection Association Standard* 1951 (Standard on Protective Ensemble for USAR Operations).

Vehicle-Related Incidents

These include extrication of persons from vehicles, and fire suppression in vehicles. In these incidents, the methods, procedures, and equipment used must conform to the recommendations of:

- The International Fire Service Training Association (IFSTA) Firefighter II curriculum.
- The NPS National Live Fire Training curriculum.
- The requirements of other applicable codes, manuals and/or standards deemed appropriate by the local AHJ.

Vehicle fires contain high levels of toxic emissions, and must therefore be treated with the same care as structural fires—that is, firefighters must be in the same full personal protective clothing, including self-contained breathing apparatus, as they would in a structural fire situation.

The people who perform motor vehicle extrication or rescues shall be trained and qualified to perform such operations and to properly use the protective gear as mandated.

To protect the health and safety of National Park Service personnel, no employee shall be directed, dispatched, (including self-dispatching) to the suppression of vehicle fires unless they meet or exceed the following standards:

- The use of personal protective equipment and self-contained breathing Apparatus are governed by adherence with the following Director's Orders, standards and regulations.

- Firefighters being dispatched to the suppression of vehicle fires require compliance with OSHA 29 CFR 1910.134 and NFPA 1971.

Personal Protective Equipment

Personnel assigned structural fire suppression duties must be properly outfitted with appropriate and approved personal protective equipment. Personal protective equipment such as helmets, footwear, gloves, hoods, trousers, coats, and self-contained breathing apparatus and personal alert safety system (PASS) shall be designed and manufactured to protect the fire engine company member from the adverse effects of fire, excessive temperature, and hot gasses. All personal protective ensembles and equipment that is used must meet NFPA 1971 and be in good repair.

Protective Ensembles

During fire ground operations, engine company members **are required to wear appropriate approved protective ensembles or as determined by the Fire Officer.** The design and certification of the protective ensemble shall be in accordance with NFPA1971. The use and maintenance of the ensemble shall be in accordance with NFPA1500.

Self-Contained Breathing Apparatus

During fire ground operations, fire personnel shall be required to wear approved self-contained breath apparatus. Self-contained breathing apparatus shall be designed, used, and maintained in accordance with 29 CFR 1910.134 and NFPA 1981.

Under no circumstances shall a fire engine company member, or any other park employee, concessions employee, or park partner be required, requested or permitted to perform structural fire containment, control, suppression, or extinguishment and overhaul operations without approved and serviceable personal protective equipment.

Personal Alert Safety System (PASS)

During fire ground operations every fire engine company member shall be equipped with a PASS device. The design and maintenance of the PASS device must be in accordance with NFPA1982.

All engine company members are required to annual fit test and medical clearances in accordance with 29 CFR 1910.134.

Wildland-Related Responses

The Structural Fire Management Program recognizes and concurs with the *Director's Order 18* definition of wildland fire.

Methods, procedures, and equipment used to suppress, control, contain, extinguish, investigate, and prevent wildland fires shall be implemented in accordance with DO-18.

For Wildland Urban Interface situations, the methods, procedures, and equipment used must be in strict accordance with DO-18 and RM-18, as well as the International Wildland Urban Interface Code and any other applicable codes.

Hazardous Material Responses

Methods, procedures, and equipment used to contain, dike, store, transport, divert, dissipate, or monitor hazardous material spills, whether liquid, powered, granulated, or solid; or hazardous material releases must be in strict accordance with:

- 29 CFR 1910.120.
- The *National Fire Protection Association's Standard 472.*
- International Fire Service Training Association manuals.
- The Park's own Standard Operating Procedures.
- Any other codes, manuals and/or standards deemed appropriate by the local AHJ.

Spills and Releases

Under no circumstances shall a fire engine company member, or any other Park employee, concessionaires employee, Park partner or visitor be required, permitted or requested to mitigate hazardous material spills and/or releases unless they have been:

- Trained to the requirements listed in 29 CFR 1910.120 and NFPA 472.
- Certified in the specific operation to be performed.
- Issued the appropriate safety gear for the specific operation.

Under no circumstance are firefighters' personal protective equipment, "turnout gear," and/or self-contained breathing apparatus to be used in lieu of approved Level I, Level II or Level III entry suits and associated equipment.

HAZMAT Training

All initial and recurring hazardous materials response training shall conform to the requirements of *Director's Order 30B*; Hazardous Spill Response Training, and 29 CFR 1910.120 and NFPA 472.

Clean-up, Removal, Disposal

Every park unit shall, through a contract with, or through another unit or agency, have access to a licensed hazardous materials clean up and disposal company.

Emergency Medical Response

Methods, procedures, and equipment used during any emergency medical response shall be in accordance with *Director's Orders 51.*

Incident Command System

The Incident Command System will be utilized for all emergency responses.

Structural Fire Apparatus

- Structural Fire Apparatus and associated equipment shall be in accordance with NFPA 1901. All new fire engines will be white in color with red reflective striping. The NPS arrowhead logo will be affixed on the front cab doors.
- Driver/Operators must obtain the appropriate type of driver's license required by their state licensing authority for the type of vehicle they will operate. Each operator will obtain a commercial drivers license (CDL).

- Before requesting funds for the purchase of any new structural fire apparatus, Park Structural Fire Coordinator shall consult with the Regional Structural Fire Management Officer.

Refurbishment of Older Engines

Occasionally an engine can be refurbished to have its service life extended. In this case, the engine can be sent to a certified re-builder who must make all necessary improvements to make the engine fully compliant with NFPA 1901. Note that there are legislative constraints on the amount of money that can be spent on this type of service life extension.

Equipment Replacement Program (ERP) will not be utilized to refurbish engines.

Disposal and/or Reassignment of Engines

The engines will be disposed of according to GSA regulations. A 2003 ruling gave the NPS the ability to sell surplus engines at a "Firm Fixed Price, Negotiated Sale" to a department that qualifies under the Rural Fire Assistance program. Any proceeds from these sales shall be returned to the ERP.

The Service may assign one of its own Park engines to a firefighting facility not owned by the National Park Service. In some cases, these engines are operated by persons other than Park employees. In either case, an approved Memorandum of Understanding (MOU) must be in place before the equipment is transferred. This MOU must cover:

- Who is authorized to operate the vehicle.
- Who is responsible for its maintenance and operating costs.
- Who is responsible for any damages incurred.
- Any restrictions about where or how the equipment can be used.
- Who is responsible for the equipment carried on the engine.

A sample Memorandum is in Appendix B of this manual.

ITM of Structural Fire Apparatus

The inspection, testing and maintenance of fire apparatus will be completed in accordance with NFPA 1915. At a minimum, documented weekly vehicle inspections are required. Fire engines must also pass an annual pump test, in accordance with NFPA 1911.

Other Types of Equipment

Class II and Class III Standpipes

Class II and Class III Standpipes are to be used only by properly trained and equipped personnel.

Hose Houses and Contents

Hose Houses shall be used for exterior fire suppression operations only. (Also see Section 4 of this manual.)

Hose houses must be designed to the specifications of NFPA 24 and must have the design approval of the AHJ.

Hose Houses should only be utilized by Certified NPS Structural Firefighters.

- The minimum hydrant pressure should be capable of delivering 95 gpm at 100 psi at the nozzle.
- Fire hoses must be tested annually, to meet the standards of NFPA 1961.
- Nozzles must meet the requirements of NFPA 1964. They must be adjustable combination nozzle, capable of flowing 95 gpm at 100 psi at the nozzle.
- The hose house must contain all required tools (approved structural fire hose, hydrant/spanner wrench, hose straps, combination nozzle, gated Y), correctly stored and serviceable.
- The hose house must be inspected and maintained in accordance with NFPA 25, Chapter 6.
- The hose house shall be secured with breakaway locks.

Section 11 - INCIDENT REPORTING

Director's Order 58 states: "All NPS structural fires involving incident response, suppression action, or destruction of property, must be reported in accordance with the requirements of this reference manual."

There are a number of rules, forms and systems to follow when reporting fires and other incidents:

- National Park Service incident reporting standards are spelled out in the most recent *Incident Reporting Procedures*, from the Associate Director for Visitor and Resource Protection. Use these procedures in conjunction with the specific instructions for the *Structural Fire Incident Report* form provided by the Structural Fire Management Program Office.

- The NPS Structural Fire Management Program (SFMP) is required to collect and report information about the occurrence and management of structural fires in the Park system. The reporting requirements are outlined in the document, *Individual Structural Fire Report*. This form, and instructions for filling it out, can be found on the Internet at: http://165.83.41.100/structal/incidentreport/index.htm.

- As the Incident Management Analysis and Reporting System (IMARS) becomes active within your Park, it will be the method to be used for reporting fire-related incidents. An incident that is entered into IMARS does not have to be entered into the Structural Fire Incident System.

Perhaps the most important thing to note here is that these reporting requirements are not just "paperwork." They are absolutely critical to supporting the NPS mission of identifying and preventing structural fires, tracking trends, and providing updated information about the conditions of Park facilities.

Structural Fire Program Management Office Responsibilities

- Establish and manage a system for reporting and disseminating structural fire incident information.

- Ensure that Regional Structural Fire Management Officers (RSFMOs) follow the established incident reporting procedures, and assist them with questions or issues about structural fire incident reporting.

- Share pertinent information with other agencies and organizations, including the National Fire Protection Association (NFPA), U.S. Fire Administration

- Develop and distribute an annual report of NPS structural fire incident activity.

Regional Structural Fire Management Officer Responsibilities

- Ensure that structural fire incident information is shared between Parks, the Regional Office and the National Program Office.

- Ensure that Park structural fire reporting procedures are being followed and assist the Parks with questions or issues related to reporting.

- Review all Level 1 and Level 2 fire incidents that occur within the Region.

- Serve as liaison with local or state agencies, ensuring that structural fire incident information pertinent to these agencies is shared with them.

Park-Level Responsibilities

- Parks must follow the most current Incident Reporting Procedures identified by the Associate Director, Visitor and Resource Protection. (This manual's appendix includes Level 1 and Level 2 Incident Reporting Requirements).

- Parks must complete structural fire incident reports within 5 days of the occurrence. The *Individual Structural Fire Report* form, and instructions for filling it out, can be found on the Internet at the NPS fire home page.

- The *Structural Fire Incident Report* must be reviewed and approved by the Park Structural Fire Chief or Structural Fire Coordinator, and submitted to the Structural Fire Program Management Office. Reports can be submitted electronically on the NPS fire home page.

- Parks must also follow any Regional incident reporting requirements.

- If a structural fire occurs in conjunction with a wildland fire, the structural and wildland fires must be reported separately.

Section 12 - INVESTIGATIONS

All structural fires and/or explosions that occur on Park property must be investigated. Proper determination of their cause is an essential part of preventing future incidents, as well as compiling meaningful fire-related statistics. Accurate statistics are then used to form the NPS' fire prevention codes, standards, and training.

Launching an Investigation

Investigation Chain of Command:

- The Park Superintendent, Chief Ranger, or their designee will notify the Regional Chief Ranger of all fires or explosions involving structures and contents.

- The Regional Chief Ranger will contact the Associate Regional Director, Operations and Regional Structural Fire Management Officer.

- Working with the Park, the Associate Regional Director, Operations and the Regional Structural Fire Management Officer will make a determination as to which agencies will be contacted and how extensive the investigation must be.

- The Associate Regional Director, Operations will establish a structural fire review team within 24 hours of any incident that results in a fatality or a significant dollar loss, or that is considered controversial or unusual.

Review team procedures will be determined in accordance with this reference manual.

Investigation Site Procedures:

Law Enforcement Rangers, Park Police, or their designees must secure the scene of any fire or explosion until the fire investigator(s) arrive. All structural fires and explosions must be treated as potential crime scenes, and handled accordingly.

The purpose of the investigation is to determine the origin and cause of the incident. The fire will be classified as incendiary, providential, accidental, or undetermined. In fires with the potential of subrogation—for instance, those that may be the result of a faulty product or contractor error—the investigation will include gathering evidence to seek compensation for the loss.

A fire or explosion investigation is a complex endeavor involving both art and science. The data compilation and analysis must be accomplished objectively and truthfully. The basic methodology of the fire investigation should be a systematic approach, with attention to all relevant details in accordance with NFPA 921.

After any structural fire or explosion, always follow the established Regional and Service-wide reporting procedures. This includes notification of Park, Region and WASO offices. The scene of the incident must be secured, and salvage and overhaul of the damaged area will be completed only to the extent that prevents rekindling of the fire.

The Regional Structural Fire Incident Review Team (RSFIRT)

Depending on the scope or nature of the fire, a Regional Structural Fire Incident Review Team may be assembled. The team reports to the Associate Regional Director, Operations or their designee. It is made up of:

- The Regional Structural Fire Management Officer.
- The Regional Safety Officer.
- A Regional Law Enforcement Specialist/Criminal Investigator.
- A Park unit representative(s).
- Any other specialists as needed to adequately review the incident.

The functions of the team:

- Provide assistance to the park in the area of structural fire investigation.
- Review the incident, including how the notification, response, suppression, salvage, and investigation were handled; plus the Park's fire prevention plan and any inspection, maintenance or testing records for any systems involved in the incident.
- Ensure that plans are developed and action is taken to prevent future fires of the similar cause.

Regional Structural Fire Incident Review Teams will be mobilized under the following conditions:

- When a Park requests assistance after a structural fire/explosion incident
- When serious injuries are reported in conjunction with a structural fire/explosion incident. "Serious" injury is defined as one, which requires advanced life support and/or leads to overnight hospitalization.
- When a fatality occurs as a result of the fire or explosion.

- When there is either a significant loss, or an incident that is considered controversial or unusual.

Investigation Resources

A Park may conduct its own in-house investigation if it has qualified investigative personnel that have been approved by the Regional Structural Fire Management Officer. The resources below are listed in order of their overall priority as contacts, and may be available for investigative assistance.

Local Fire Investigators

A local fire investigator may be used if the local investigator is a full-time investigator and has testified in court as an expert witness.

State Fire Marshal

A representative from the State Fire Marshal's office may assist in fire/explosion investigations, but he or she must be a full-time investigator and must have testified in court as an expert witness.

U.S. Department of Treasury, Alcohol Tobacco and Firearms (ATF)

Requests made to the ATF for assistance in investigating significant structural fire incidents must be coordinated with the Regional Structural Fire Management Officer (RSFMO). ATF Regional Contact numbers can be found in Appendix D.

Section 13 - TRAINING

Training is a challenge for nearly every organization, including fire and emergency services—however, it is a sign of the organization's commitment to provide quality service and to ensure the health and safety of its employees. Training will vary in subject and depth with the particular job function, but there will always be a need for some level of training in order for employees to develop and maintain proficiency. The fire and emergency services have a lengthy history of delivering innovative, high-quality training.

The Structural Fire Prevention and Suppression training programs shall be administered by the National Structural Fire Training and Education Officer with oversight provided by the Structure Fire Program Manager. The Structural Fire Training and Education Officer is responsible for reviewing and approving course curricula and equivalencies. In addition the Structural Fire Training and Education Officer will validate the credentials of the training instructors for NPS Structural Fire Courses.

The training program consists of courses designed to meet or exceed current NFPA Standards numbers 472, 1001, 1002, 1021, and 1500, OSHA requirements 29 CFR 1910.120 and 29 CFR 1910.134, and PMS Subsystem Guide 310-1. Instructor credentialing, performance, evaluation and documentation procedures shall adhere to NFPA Standard 1041. Currently certification is provided at three levels:

NPS Certified Firefighter
NPS Driver/Operator
NPS Fire Officer

Certification for the NPS Structural Fire qualifications is dependent upon the individual successfully completing the issued Task Book. Since curriculum revisions and adjustments are periodically initiated, it is necessary to refer to the Structural Fire Training and Education Officer for current certification requirements in the positions indicated. Additional information may be found in Section 14, entitled, Certifications and Qualifications.

Individuals in pursuit of certification equivalency shall forward all required documentation through the Park's Structural Fire Coordinator to the Structural Fire Training and Education Officer for review and approval.

Documentation and Accreditation

Lead Instructors are charged with documentation of student certification and are required to provide student attendance, evaluation, and final grade documentation to the Structural Training and Education Officer. Within ten calendar days of course completion of a course of instruction the lead instructor will forward all required documentation to the Structural Fire Training and Education Officer. The Training Program Coordinator is responsible for establishing and maintaining a permanent record.

Certification and Qualification Currency

Personnel certified and/or qualified shall participate in 10 monthly training sessions consisting of 24 hours of total training in a calendar year. These training sessions should cover a variety of topics and skills extrapolated from the NPS Structural Fire curriculum, task books and IFSTA Firefighter I and II curriculum. In addition, all certified structural firefighters are required to participate in a minimum of one live fire training evolution every two years, to maintain certification and/or to prepare for advancement.

Training records will be submitted to the Regional Structural Fire Management Officer on an annual basis.

Failure to maintain certification may result in removal from participation in engine company activities by the Park Structural Fire Coordinator. The firefighter will only be returned to engine company activities when the requirements are met and approved by the Structural Fire Training and Education Officer. Individuals whose currencies have lapsed for more than two years will be required to complete the NPS Structural Fire curriculum or equivalent as approved by the Structural Fire Training and Education Officer before they will be reinstated.

Scheduling Of Training

Training plans should advocate participation of adjacent assisting agencies, whenever possible to foster mutual aid efficiency.

Firefighter Safety during Training

Training itself may involve a hazardous situation. Safety will always take priority in any training class, and the instructor or training officer is responsible for ensuring a “safety first” policy is enforced.

All NFPA training standards have a section on safety that the instructor shall review prior to the start of training. Two good starting points for an instructor or training officer are:

- NFPA 1500 – "Sta*ndard for Fire Department Occupational Safety and Health."*
- NFPA 1521 – "*Standard for Fire Department Safety Officer."*

Live Fire Training

Live fire training, from any source, will be conducted in full compliance with NFPA 1403 – "*Standard on Live Fire Training Evolutions* and with approval of the Structural Fire Training and Education Officer.

Non Affiliated Training – Education

Continuing training and education for professional development is encouraged but may not be substituted for training prescribed in RM-58, without review and approval of the Structural Fire Training and Education Officer.

Hazardous Materials Training

All Structural Firefighters will be trained to the level of First Responder – Operations as defined in NFPA 472 and 29 CFR 1910.120.

First Responders at the "Operations" level are those persons (firefighters) who, as part of an initial response, are trained to deal with the release (or potential release) of hazardous materials. The goal of First Responder – Operations Personnel is to protect nearby people, property, and the environment in a defensive fashion—that is, to control the release from a safe distance and keep it from spreading.

First Responder Operations training requires from 8 to 24 hours, depending on the training course.

Fire Prevention Training

When employees know how to work safely, fire hazards and the resultant losses can be minimized. Fire prevention training should involve items that are related specifically to the employee's job tasks, and general fire prevention knowledge. The general fire prevention training program requirements shall be:

- Documented.
- Mandated and supported by management.

- Concise and focused.
- Specific to employee duties and responsibilities.
- Reinforced through fire safety education programs, practical training, and the distribution of messages and publications.

Fire Safety Training

The primary responsibility for employee fire safety training lies with each supervisor. To ensure that appropriate recurring training is conducted in accordance with this manual, a sufficient number of supervisors and employees, representing each division, will be identified and trained as instructors in basic fire prevention practices. All training will be documented and maintained on file.

General fire safety training is a requirement of all employees. At a minimum, this must include:

- Evacuation and accountability procedures.
- Means of reporting fires and other emergencies.
- Fire prevention in the workplace.
- Fire Drills will be conducted in the following occupancies in accordance with NFPA 10 Chapter 6.1

  Assembly
  Board and Care
  Business
  Day-care
  Detention and Correctional
  Dormitories
  Educational
  Health Care
  Hotels
  Mercantile

Periodic Retraining and Continuing Education

Fire safety is an ongoing concern, and periodic refresher training must be conducted to reacquaint employees with fire safety concepts, and improve on their knowledge and performance. The goal of recurring fire safety training is to ensure that emergency actions will become "second nature" during an incident. Training must be conducted at frequent enough intervals to accomplish this goal in accordance with 29 CFR 1910.38(f).

Fire Extinguisher Training

In workplaces where fire extinguishers are provided for employee use, all employees must be trained on the general principles of fire extinguisher use and the hazards involved with fighting incipient fires. This education must be provided during every new employee orientation, and at least annually thereafter.

A workplace may have an Emergency Action Plan that designates certain employees to be responsible for extinguishing incipient fire, and which instructs all other employees to immediately evacuate the facility. If specific individuals are assigned fire suppression responsibilities, those employees must be trained on how to properly do so. This training is required when a person is first assigned to this group or workplace, and at least annually thereafter.

Volunteers in the Park Program

Volunteers play an important role in the structural fire mission for each Park. Volunteers are required to participate in the same basic fire safety training requirements, at the same intervals, as all NPS employees.

Participants of the "Volunteer in Park" programs shall not participate in any hazardous duty activities, in accordance with *Director's Order 7*.

Concessionaires

Park concessionaires shall create and implement a fire safety-training program for their employees. Concessionaire employees shall be provided fire safety training that is similar in scope and mission the park units program. Concession employees may be allowed to voluntarily participate in NPS fire prevention and suppression activities, in accordance with the provisions of the concessions contract, and NPS policies.

Section 14 - QUALIFICATIONS AND CERTIFICATIONS

This section covers required minimum certification and qualification criteria established for positions described in conjunction with the Structural Fire Management Program. Certification and qualification standards cited are aligned and in compliance with NFPA Standards and the NWCG Subsystem Guide No. 310-1.

National Training and Education Officer	
Prerequisite Experience or equivalent	NFPA Fire Inspector I NFPA Fire Service Instructor I NFPA Fire Officer I and two years of field experience and/or formal education directly related to fire prevention and suppression.
Required Education or equivalent	NFA Fire Inspection Principles NFA Fire Protection: Structures and Systems NFA Plans Review for Inspectors NFA Performance-Based Design NWCG M-410 I-300
Physical Fitness	Light – Duties mainly involve office-type work with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity.
Currency Requirements	40 hours every 2 years in related field
Required Training or equivalent *(to be accomplished within 2 years of EOD)*	NFPA Fire Inspector III NFPA Plans Review I
Recommended Training or equivalent	NFPA Management of Fire Prevention Programs, or equivalent NFPA Fire Service Instructor II, III NFPA Fire Officer II, III, IV NFPA Plans Review II

Prerequisite Experience or equivalent	Licensed as a Professional Fire Protection Engineer
Recommended Additional Education	NFA Fire Inspection Principles NFA Fire Protection: Structures and Systems NFA Plans Review for Inspectors NFA Performance-Based Design
Physical Fitness	Light – Duties mainly involve office-type work with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity.
Currency Requirements	40 hours every 2 years in related field

Regional Structural Fire Management Officer	
Prerequisite Experience or equivalent	NFPA Fire Inspector I NFPA Fire Service Instructor I NFPA Fire Officer I and two years of field experience and/or formal education directly related to fire prevention and suppression.
Required Education or equivalent	NFA Fire Inspection Principles NFA Fire Protection: Structures and Systems NFA Plans Review for Inspectors NFA Performance-Based Design
Physical Fitness	Light – Duties mainly involve office-type work with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity.
Currency Requirements	40 hours every 2 years in related field

Regional Structural Fire Management Officer	
Required Training or equivalent *(to be accomplished within 2 years of EOD)*	NFPA Fire Inspector III NFPA Plans Review I
Recommended Training or equivalent	NFA Management of Fire Prevention Programs or equivalent NFPA Fire Service Instructor II, III NFPA Fire Officer II, III, IV NFPA Plans Review II

Regional Structural Fire Prevention Specialist	
Prerequisite Experience or equivalent Required Education or equivalent	NFPA Fire Inspector I NFA Fire Inspection Principles NFA Fire Protection: Structures and Systems NFA Plans Review for Inspectors
Physical Fitness	Light – Duties mainly involve office-type work with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity.
Currency Requirements	40 hours every 2 years in related field
Required Training or equivalent (to be accomplished within 2 years of EOD)	NFPA Fire Inspector II NFPA Plans Review I NFA Management of Fire Prevention Programs or equivalent
Recommended Training or equivalent	NFPA Fire Service Instructor III NFPA Plans Review II NFPA Life Safety Code

Park Structural Fire Chief	
Prerequisite Experience or equivalent	Four years Structural Firefighter NPS Certified Firefighter NPS Driver/Operator NPS Fire Officer NFPA Fire Inspector II NFPA Fire Service Instructor II
Recommended Education or equivalent	Two years of accredited formal education in fire science.
Physical Fitness	Light – Duties mainly involve office-type work, with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity. If this position includes performing fire suppression duties, the person must meet the arduous fitness standard.
Currency Requirements	40 hours every 2 years in related field
Required Training *(to be accomplished within 2 years of EOD)*	NFPA Fire Officer IV NFPA Plans Review I Wildland Urban Interface training
Recommended Training	Any pertinent NFA or NFPA classes NFPA Plans Review II NFPA Fire Service Instructor III NFPA Fire Inspector III

Park Structural Fire Coordinator	
Prerequisite Experience (*with Engine Company)*	Introduction to NPS Structural Fire – under development
Prerequisite Experience *(without Engine Company)*	None

Park Structural Fire Coordinator	
Physical Fitness	Light – Duties mainly involve office type work with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity. If this position includes performing fire suppression duties, the person must meet the arduous fitness standard.
Currency Requirements	40 hours every 2 years in related field
Required Training *(with Engine Company)* *(To be accomplished within 2 years of EOD)*	None
Required Training *(without Engine Company)* *(To be accomplished within 2 years of EOD)*	None
Recommended Training *(with Engine Company)*	NFPA Firefighter I & II NFPA Apparatus/Driver Operator NFPA Fire Officer I NFPA Fire Inspector I NFPA Fire Service Instructor I I-200
Recommended Training *(without Fire Company)*	NFPA Inspector I NPS Introduction to Park Structural Fire Coordinator NFPA Life Safety Code Seminar NFPA Automatic Sprinkler System Seminar NFPA National Fire Alarm Code Seminar NFPA National Electrical Code Seminar

Park Chief Officer	
Prerequisite Experience or equivalent	Four years Structural Firefighter NPS Certified Firefighter NPS Driver/Operator NPS Fire Officer NFPA Fire Inspector II NFPA Fire Service Instructor II
Recommended Education or equivalent	Two years of accredited formal education in fire science.
Physical Fitness	Arduous – Duties involve fieldwork that requires physical performance with above-average endurance and superior conditioning. This may include an occasional demand for extraordinarily strenuous activities in emergencies, under adverse environmental conditions and over extended time periods. Requirements include running, walking, climbing, jumping, twisting, bending and lifting more than 50 pounds. The pace of work typically is set by the emergency situation.
Medical Requirements	Must comply with DO-57 – *"Occupational Medical Standards; Health and Fitness"* and/or NFPA Standard 1582 – "*Medical Requirements for Firefighters"*
Currency Requirements	40 hours every 2 years in related field
Required Training *(to be accomplished within 2 years of EOD)*	NFPA Fire Officer III NFPA Plans Review I Wildland Urban Interface training Hazardous Materials FRO
Recommended Training	Any pertinent NFA or NFPA classes NFPA Fire Officer IV NFPA Fire Service Instructor III NFPA Fire Inspector III NFPA Plans Review II

Park Fire Prevention Officer	
Prerequisite Experience or equivalent	Minimum two year experience as Fire Inspector NFPA Fire Inspector I NFPA Fire Service Instructor I
Physical Fitness	Light – Duties mainly involve office-type work with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity. If this position includes performing fire suppression duties, the person must meet the arduous fitness standard.
Currency Requirements	40 hours every 2 years
Required Training *(to be accomplished within 2 years of EOD)*	NFPA Fire Inspector II NFA Management of Fire Prevention Programs or equivalent
Recommended Training	NFPA Fire Officer I NFPA Life Safety Code Seminar NFPA Automatic Sprinkler System Seminar NFPA National Fire Alarm Code NFPA National Electrical Code Seminar NFPA Public Fire and Life Safety Educator I, II & III I-200

Park Fire Inspector	
Prerequisite Experience or equivalent	None
Physical Fitness	Light – Duties mainly involve office-type work, with occasional field activity; and light physical exertion that requires basic good health. Activities may include stair-climbing, standing, operating a vehicle and long work hours, as well as some bending, stooping and light lifting. Individuals almost always can govern the extent and pace of their physical activity. If this position includes performing fire suppression duties, the person must meet the arduous fitness standard.
Currency Requirements	40 hours every 2 years
Required Training *(to be accomplished within 2 years of EOD)*	NFPA Fire Inspector I NFPA Fire Instructor I NPS Introduction to Park Structural Fire Coordinator Hazardous Material Awareness
Recommended Training	NFPA Firefighter I & II NFA Plans Review for Inspectors NFPA Life Safety Code Seminar NFPA Automatic Sprinkler System Seminar NFPA National Fire Alarm Code NFPA National Electrical Code Seminar

Engine Company Officer	
Prerequisite Experience or equivalent	NPS Certified NPS Driver/Operator NPS Fire Officer I – 100 I – 200 Hazardous Material FRO

Engine Company Officer	
Physical Fitness Standard	Arduous – Duties involve fieldwork that requires physical performance with above-average endurance and superior conditioning. This may include an occasional demand for extraordinarily strenuous activities in emergencies, under adverse environmental conditions and over extended time periods. Requirements include running, walking, climbing, jumping, twisting, bending and lifting more than 50 pounds. The pace of work typically is set by the emergency situation.
Medical Requirements	Must comply with DO-57 – *"Occupational Medical Standards; Health and Fitness"* and/or NFPA Standard 1582 – "*Medical Requirements for Firefighters"*
Currency Requirements	Annual: 24 hours Minimum 10 monthly structural firefighting training sessions (NFPA 1500 3-3.4) Annual: 8-hour Hazardous Material refresher Every 2 Years: Live fire exercise
Required Training *(to be accomplished within 2 years of EOD)*	NFPA Fire Service Instructor I NFPA Fire Inspector I I – 300 Hazardous Material First Responder – Operations Basic First Aid / CPR
Recommended Qualifications / Training	Emergency Medical First Responder Crew Supervisor (S-230) Ignition Operations (S-234) Wildland Urban Interface (S-215) Confined Space Awareness Command and Control of Fire Department Operations at Target Hazards NFA (R314)

Driver/Operator	
Prerequisite Experience or equivalent	One year of field experience directly related to structural firefighting NPS Certified Firefighter NPS Driver/Operator I – 100 I – 200 Hazardous Material First Responder – Operational
Physical Fitness	Arduous – Duties involve fieldwork that requires physical performance with above-average endurance and superior conditioning. This may include an occasional demand for extraordinarily strenuous activities in emergencies, under adverse environmental conditions and over extended time periods. Requirements include running, walking, climbing, jumping, twisting, bending and lifting more than 50 pounds. The pace of work typically is set by the emergency situation.
Medical Requirements	Must comply with DO-57 – *"Occupational Medical Standards; Health and Fitness"* and/or NFPA Standard 1582 – "*Medical Requirements for Firefighters"*
Currency Requirements	Annual: 24 hours Minimum 10 monthly structural firefighting training sessions (NFPA 1500 3-3.4) Annual: Hazardous Material Refresher Every 2 Years: Live fire exercise Emergency Vehicle Operations Course (EVOC) Valid commercial driver's license appropriate for equipment being operated.
Required Training *(to be accomplished within 6 months of EOD)*	Basic First Aid / CPR Must meet state licensing requirements

Driver/Operator	
Recommended Qualifications/Training	S 130 - Wildland Firefighter Training S 190 - Introduction to Wildland Fire Behavior Emergency Medical First Responder or EMT Advanced Wildland Firefighter Training (S-131) Fire Operations in the Urban Interface (S-215) Intermediate ICS (I-300) Portable Pumps and Water Use (S-211)

Structural Firefighter	
Prerequisite Experience or equivalent	
Physical Fitness	Arduous – Duties involve fieldwork that requires physical performance with above-average endurance and superior conditioning. This may include an occasional demand for extraordinarily strenuous activities in emergencies, under adverse environmental conditions and over extended time periods. Requirements include running, walking, climbing, jumping, twisting, bending and lifting more than 50 pounds. The pace of work typically is set by the emergency situation.
Medical Requirements	Must comply with DO-57 – *"Occupational Medical Standards; Health and Fitness"* and/or NFPA Standard 1582 – "*Medical Requirements for Firefighters"*
Currency Requirements	Annual: 24 hours Minimum 10 monthly structural firefighting training sessions (NFPA 1500 3-3.4) Hazardous Material First Responder – Operational Annual: 8-hour Hazardous Material refresher Every 2 Years: Live fire exercise

Structural Firefighter	
Required Training *(to be accomplished within 2 years of EOD)*	Hazardous Material First Responder – Operational I-100 I-200 Basic First Aid / CPR S 130 - Wildland Firefighter Training S 190 - Introduction to Wildland Fire Behavior
Recommended Qualifications / Training	S 211 - Portable Pumps and Water Use Emergency Medical First Responder NFPA Apparatus/Driver Operator

Fire Suppression Instructor Qualifications and Certifications

To teach an NFPA course, instructors will meet the instructor requirements of NFPA 1041. Two levels of structural fire suppression instructors are recognized, Lead and Adjunct. In addition, contract instructors may be used to conduct specialized training, or serve as subject matter experts.

Lead Instructor

This person must meet the requirements of NFPA 1041 and, as a minimum, be certified as an "Instructor II." This means the lead instructor:

- Has taken and passed all prerequisite classes.
- Has taken and passed the particular class that is being taught.
- Meets NFPA and NPS standards.
- Is recognized and verified to teach by the NPS Structural Fire Training and Education Officer.

Adjunct Instructor

This person must meet the requirements of NFPA 1041 as an "Instructor I." This means the adjunct instructor:

- Has taken and passed all prerequisite classes.
- Has taken and passed the particular class that is being taught.

- Meets NFPA and NPS standards.

- Is recognized and verified to teach by the NPS Structural Fire Training and Education Officer.

Contract Instructor – Suppression Operations

A prospective contract instructor must prepare and submit a resume that specifically outlines his or her experience, knowledge, skills, and abilities as a fire service instructor. Upon request, the contractor must furnish the following documents, references and/or information:

- Three written references from local, state, or federal fire agency directors for whom the person has provided instructional services. These references must be recent—for instruction that has been performed within the two previous years.

- Evidence of current certification as a Fire Officer in accordance with NFPA Standard 1021.

- Evidence of current certification as a Fire Service Instructor in accordance with NFPA Standard1041.

- Evidence of previous experience as a qualified instructor for National Interagency Incident Management System or National Wildland Coordination Group.

- Prospective candidates shall provide evidence of any past or present agency assignments as an NFPA-certified Fire Officer, including responsibilities for initial and extended emergency operations in structural, wildland, Liquid and Flammable Gas and Hazardous Materials Incident Management.

Contract Instructor – Other Structural Fire Fields

A prospective contract instructor must prepare and submit a resume that specifically outlines his or her experience, knowledge, skills, and abilities as a fire service instructor. Upon request, the contractor must furnish the following documents, references and/or information

- Written references from local, state, or federal fire agency directors for whom the person has provided instructional services. These references must be for instruction that has been performed within the two previous years.

- Evidence of current certification as a fire Service Instructor in accordance with NFPA Standard 1041 or completion of M-410 effective instructor.

- Prospective candidates shall provide evidence of any past or present assignments as a NFPA-certified Fire Instructor, in the field being instructed.

Certification Exceptions

It is imperative that the evaluation process weighs the technical and teaching competency of the instructor against NFPA standards. In some cases a Regional Structural Fire Management Officer may designate and certify an instructor based on their personal experience, skill, knowledge and instructional abilities. This may be done as a joint decision of the RSFMO and the Structure Fire Program Training and Education Officer.

Qualified technical specialists may be used to present specialized training or as subject matter experts. Technical specialists are used at the discretion of the NPS Structural Fire Program Manager and/or Training Officer.

Recordkeeping

All personnel who participate in NPS structural fire suppression must meet established training requirements and competencies established for each position, including the Medical and physical fitness requirements identified in *Director's Order 57* (and its Reference Manual), and the NFPA Standard 1582, and be certified by the NPS Structural Fire Program to perform fire suppression duties.

The Park Superintendent, or their designee, is responsible for verifying and certifying that their employees meet the qualification standards for the positions to which they are assigned. Current records of all training and certification must be included in each Park employee's personnel file and updated as necessary.

All persons who participate in structural firefighting will have their training and qualification records entered into the NPS National Structure Fire Training database, which is currently under development at the Fire Management Program Center.

NPS and contracted Instructors will meet fire suppression instructor qualifications. Records of classes NPS instructors have taught must be entered into the NPS database. Records of classes that contract instructors have taught must be included in their bid package submittal, and verified by the structural fire national training and education officer prior to the award of contract.

Live fire training will be conducted in accordance with NFPA Standard 1403 – *"Live Fire Training Evaluations."* All engine company members are required to attend a live fire training session, conducted or approved by the structural fire national training and education officer, at least once every two years.

Section 15 - MEDICAL AND PHYSICAL FITNESS REQUIREMENTS

Section 14 of this manual contains the specific requirements for individual job titles.

Medical Requirements

Its hazardous nature makes structural firefighting one of the occupations with the highest death rates. All personnel involved in active fire ground operations must comply with the medical requirements of NPS 57 and/or NFPA 1582.

In addition, all structural fire personnel who may enter a burning building, be called on to pull or operate charged hoses, perform rescues, or do anything other than support the structural fire operation are required to maintain a physical fitness level equivalent to the wildland firefighter rating of “Arduous.”

Physical Fitness Requirements

Individuals that are required to meet the Arduous, Moderate or Light physical fitness standards shall pass the Work Capacity Test (PACK Test) as outlined in RM-18.

Section 16 – FIRE SAFETY FOR CONCESSIONAIRES

Life safety is, and will at all times be, the first priority in all concession facilities, buildings, operations and all other aspects of businesses that operate under contract to the National Park Service.

Basic Rules for Concessionaires

Concession operations must focus on structural fire prevention and minimizing the damage resulting from structural fires. Concessionaires must educate their employees about structural fire prevention, resource protection, and hazardous conditions. This includes cooperating with, and participating in, Park safety and training programs.

Concessionaires that operate overnight accommodations for Park visitors are required to have a written Emergency Operations Plan, which must be available to guests upon request. The plan will include:

- Emergency notification procedures.
- Overall emergency procedures.
- Details of safety training programs for employees.
- Posted evacuation routes.
- Any additional information required by the National Park Service.

Concessionaires must evaluate any proposed construction of new facilities or changes of occupancy in existing buildings, to determine how fire safety will be impacted by the change, and whether structural fire protection is necessary or possible. Any physical changes to facilities; changes in occupancy, on new construction must be approved by park management prior to the beginning of work.

Concession facilities will use the best available technology to detect and provide early warning of fires, including prevention and suppression activities.

Contract Language

It is recommended that standardized, specific language regarding structural fire prevention and suppression is included in the maintenance plans and operating plans of any concession-related contract.

Maintenance Plan – Standard Language

The concessionaire's maintenance responsibilities include, but are not limited to, the inspection, testing and maintenance of:

- Intrusion and fire alarm systems.
- Fire suppression systems.

The concessionaire will ensure general preventive maintenance on a regular and well-defined schedule, and must guarantee that any emergency repairs to these systems will be made in a timely manner. All improvements that are the concessionaire's responsibility must achieve the goals described in:

- The Concessions Management Guideline.
- The concessionaire's environmental management plan.
- The concessionaire's risk management plan.
- Any other pertinent local or Park codes and guidelines.

Compliance with Codes

The project review process shall include a determination that the concessionaire is complying or, for new concessionaires, intends to comply with all applicable codes, unless written exceptions have been approved by the NPS. These codes include but are not limited to the:

- International Building Code.
- International Mechanical Code.
- International Plumbing Code.
- NFPA 1 – *"Uniform Fire Code."*
- NFPA 101 – *"Life Safety Code."*
- All other applicable codes and standards.

Safety Equipment

All concessionaires must provide and maintain safety devices, fire detection and suppression equipment, and any additional equipment that is required by code for the protection of employees and the public.

Fire Equipment

The concessionaire is responsible for maintenance, inspection and testing of all fire suppression equipment within the assigned areas, in accordance with their current concessions contract and NFPA standards. This includes the hose boxes, fire hoses, standpipes, and fire extinguishers within its assigned areas of responsibility.

Roof Replacement

As roof materials are replaced on NPS-owned, non-historic structures, Class A fire resistant materials shall be used to maximize the fire safety of any structure assigned to the concessionaire. Prior to the start of work, NPS written approval of proposed materials and colors is required

Historic Structures

For structures of historic designation or significance, the concessionaire must comply with all NPS directives to maintain the historic nature of the building. All proposed rehabilitation and maintenance activities shall have prior NPS approval.

Wildland Urban Interface

The concessionaire will work with NPS staff to reduce identified wildland fire hazards.

Concessionaire Housing

The concessionaire is responsible for maintenance and repair of all housing and related facilities occupied by the concessionaire's employees, in accordance with their current concessions contract. This includes upkeep of the facilities, fixtures, and furnishings on an ongoing basis to ensure the housing achieves the goals described in these documents:

- The Concession Management Guideline.
- The NPS Housing Management Handbook.
- *Director's Order 36*.
- The concessionaire's own employee-housing policy.

Woodstoves, fireplaces and chimneys shall be inspected and cleaned at least on an annual basis. Other heating systems shall be inspected and cleaned on a regular cycle, and prior to each new occupancy or season.

The concessionaire must perform annual fire and safety inspections of all employee housing to ensure compliance with fire, health, and safety codes and NPS policies and guidelines, in accordance with their current concessions contract.

Operating Plan – Standard Language

The concessionaire's mandatory annual fire and safety inspections of all concession buildings shall be made by qualified personnel. Written records verifying the completion and results of these inspections must be maintained by the concessionaire, and made available to the NPS upon request.

The National Park Service will also ensure that structural fire inspections and the maintenance of protection systems occur through the Concession Management Evaluation process.

Employee Housing

The concessionaire will inspect all quarters for fire and safety compliance soon after initial occupancy of a residence, and at least once a year thereafter. These inspections shall be made by qualified personnel, and must be documented in writing and made available to NPS upon request.

The concessionaire will perform regularly scheduled (preferably monthly) fire drills in all employee housing with heights of more than one story. NPS must be notified of the drills before they take place. A written record of the fire drills will be maintained by the concessionaire and made available to NPS upon request.

Fire Protection and Suppression

The concessionaire must ensure that all buildings, facilities and support equipment within its assigned areas meet or exceed the NFPA standards, in accordance with their current concessions contract.

The concessionaire's fire detection and life safety systems and equipment shall be maintained to NFPA standards at all times. These systems shall be inspected on a regular basis by qualified personnel, who must verify the inspection results and equipment/systems conditions in writing. These reports will be made available to NPS upon request.

The concessionaire will immediately report all structural fires to NPS.

Concession Personnel and Fire Suppression

Depending on the size and nature of their operation, a concession company may have its own fire engine company, or may form an integral part of a Park-based engine company. In some cases, concession employees may also be part of a Park's fire safety team. The role and level of participation of the concessionaire must be specifically detailed in the maintenance and/or operational plan of the concession contract.

Concessionaire-operated fire engine companies, and individuals participating in structural fire suppression, must meet the same training and certification requirements established in this Reference Manual for NPS employees performing similar duties.

Concessionaire-operated fire engine companies may operate only with a formal, written structural fire Mutual Aid Agreement with the Park. The agreement must contain details about:

- How emergency incidents are managed.
- How command is established at the scene of an incident.
- Notification procedures for employees, the Park, and the public.
- The oversight and review process for engine company operations.
- Any payment or other compensation arrangements between the concessionaire and the Park or NPS.
- Training and certification requirements of concession personnel.
- How equipment and supplies are procured and maintained.
- Staffing levels for emergencies.

Concession personnel who have been authorized, by park and concessions management and the AHJ, to participate as part of an NPS engine company must also have a formal, written structural fire aid agreement with the park. This document must outline:

- How concession employees are to be paid, both during training and actual incidents.
- How the concession employees are to be covered by Workers Compensation.

- Who pays for maintaining the NPS health and physical requirements.
- Response responsibilities, both during work and off-duty hours.
- Training and certification requirements.
- Procurement of equipment and supplies.

At times, concession personnel may participate on a NPS engine company, but their participation is not required by the concession contract. In these cases, an additional written agreement is required to ensure all parties understand responsibilities, constraints and "reasonable accommodation" to the circumstances. The concessionaire who employs the individual will participate as the agreement is developed, to ensure that the employee's job responsibilities for the concessionaire are not compromised. At a minimum the agreement will cover:

- How concession employees are to be paid, both during training and actual incidents.
- How the concession employees are to be covered by Workers Compensation.
- Who pays for maintaining the NPS health and physical requirements.
- The availability of the individual responder, both during work and off-duty hours.
- Training and certification requirements.

IMPORTANT NOTE: Concession employees, or anyone else, may NOT be used as a Volunteer in Parks (VIP) during hazardous operations. In cases of structural fire, a "hazardous operation" means:

- Any time live fire is present.
- Any time the incident is serious enough to require the wearing of personal protective gear.
- Any situation in which regular government employees would be entitled to Hazardous Duty pay.

REFERENCE DOCUMENTS/BIBLIOGRAPHY

NPS Museum Handbook

National Fire Protection Association

Occupational Safety and Health Administration (OSHA)

International Fire Service Training Association (IFSTA)

Reference Manual 18

Director's Order 9

Director's Order 20

Director's Order 51

Director's Order 30

Director's Order 57

Director's Order 58

NPS Management Policies

29 CFR 1910.35	Compliance with NFPA 101-2000, Life Safety Code.
29 CFR 1910.36	Design and construction requirements for exit routes.
29 CFR 1910.37	Maintenance, safeguards, and operational features for exit routes.
29 CFR 1910.38	Emergency action plans.
29 CFR 1910.39	Fire prevention plans.
29 CFR 1910.120	Hazardous waste operations and emergency response
29 CFR 1910.134	Respiratory protection
29 CFR 1910.155	Subpart L—Fire Protection Scope, application and definitions applicable to this subpart.
29 CFR 1910.156	Fire brigades.
29 CFR 1910.157	Portable fire extinguishers.
29 CFR 1910.158	Standpipe and hose systems.
29 CFR 1910.159	Automatic sprinkler systems.
29 CFR 1910.160	Fixed extinguishing systems, general.
29 CFR 1910.161	Fixed extinguishing systems, dry chemical.
29 CFR 1910.162	Fixed extinguishing systems, gaseous agent.
29 CFR 1910.163	Fixed extinguishing systems, water spray and foam.
29 CFR 1910.164	Fire detection systems.
29 CFR 1910.165	Employee alarm systems.

NFPA 1	Uniform Fire Code
NFPA 10	Standard for Portable Fire Extinguishers
NFPA 11	Standard for Low-, Medium-, and High-Expansion Foam Systems
NFPA 11A	Standard for Medium- and High-Expansion Foam Systems
NFPA 12	Standard on Carbon Dioxide Extinguishing Systems
NFPA 12A	Standard on Halon 1301 Fire Extinguishing Systems
NFPA 13	Standard for the Installation of Sprinkler Systems
NFPA 13D	Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
NFPA 13E	Recommended Practice for Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems
NFPA 13R	Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
NFPA 14	Standard for the Installation of Standpipe, Private Hydrants, and Hose Systems
NFPA 15	Standard for Water Spray Fixed Systems for Fire Protection
NFPA 16	Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems
NFPA 17	Standard for Dry Chemical Extinguishing Systems
NFPA 17A	Standard for Wet Chemical Extinguishing Systems
NFPA 18	Standard on Wetting Agents
NFPA 20	Standard for the Installation of Stationary Pumps for Fire Protection
NFPA 22	Standard for Water Tanks for Private Fire Protection
NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
NFPA 25	Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
NFPA 30	Flammable and Combustible Liquids Code
NFPA 30A	Code for Motor Fuel Dispensing Facilities and Repair Garages
NFPA 30B	Code for the Manufacture and Storage of Aerosol Products
NFPA 31	Standard for the Installation of Oil-Burning Equipment
NFPA 32	Standard for Drycleaning Plants
NFPA 33	Standard for Spray Application Using Flammable or Combustible Materials
NFPA 34	Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids
NFPA 35	Standard for the Manufacture of Organic Coatings
NFPA 36	Standard for Solvent Extraction Plants
NFPA 37	Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines
NFPA 40	Standard for the Storage and Handling of Cellulose Nitrate Film
NFPA 42	Code for the Storage of Pyroxylin Plastic
NFPA 45	Standard on Fire Protection for Laboratories Using Chemicals
NFPA 50	Standard for Bulk Oxygen Systems at Consumer Sites
NFPA 50A	Standard for Gaseous Hydrogen Systems at Consumer Sites

NFPA 50B	Standard for Liquefied Hydrogen Systems at Consumer Sites
NFPA 51	Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes
NFPA 51A	Standard for Acetylene Cylinder Charging Plants
NFPA 51B	Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 52	Compressed Natural Gas (CNG) Vehicular Fuel Systems Code
NFPA 53	Recommended Practice on Materials, Equipment and Systems Used in Oxygen-Enriched Atmospheres
NFPA 54	National Fuel Gas Code
NFPA 55	Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks
NFPA 57	Liquefied Natural Gas (LNG) Vehicular Fuel Systems Code
NFPA 58	Liquefied Petroleum Gas Code
NFPA 59	Utility LP-Gas Plant Code
NFPA 59A	Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)
NFPA 61	Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
NFPA 68	Guide for Venting of Deflagrations
NFPA 69	Standard on Explosion Prevention Systems
NFPA 70	National Electrical Code® National Electrical Code¨
NFPA 70A	Electrical Code for One- and Two-Family Dwellings and Mobile Homes
NFPA 70B	Recommended Practice for Electrical Equipment Maintenance
NFPA 70E	Standard for Electrical Safety Requirements for Employee Workplaces
NFPA 72	National Fire Alarm Code¨
NFPA 73	Electrical Inspection Code for Existing Dwellings
NFPA 75	Standard for the Protection of Information Technology Equipment
NFPA 76	Recommended Practice for the Fire Protection of Telecommunications Facilities
NFPA 77	Recommended Practice on Static Electricity
NFPA 79	Electrical Standard for Industrial Machinery
NFPA 80	Standard for Fire Doors and Fire Windows
NFPA 80A	Recommended Practice for Protection of Buildings from Exterior Fire Exposures
NFPA 82	Standard on Incinerators and Waste and Linen Handling Systems and Equipment
NFPA 85	Boiler and Combustion Systems Hazards Code
NFPA 86	Standard for Ovens and Furnaces
NFPA 88A	Standard for Parking Structures
NFPA 90A	Standard for the Installation of Air-Conditioning and Ventilating Systems
NFPA 90B	Standard for the Installation of Warm Air Heating and Air-Conditioning Systems
NFPA 91	Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids

NFPA 92A	Recommended Practice for Smoke-Control Systems
NFPA 92B	Guide for Smoke Management Systems in Malls, Atria, and Large Areas
NFPA 96	Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
NFPA 97	Standard Glossary of Terms Relating to Chimneys, Vents, and Heat-Producing Appliances
NFPA 99	Standard for Health Care Facilities
NFPA 99B	Standard for Hypobaric Facilities
NFPA 99C	Standard on Gas and Vacuum Systems
NFPA 101	Life Safety Code¨
NFPA 101A	Guide on Alternative Approaches to Life Safety
NFPA 101B	Code for Means of Egress for Buildings and Structures
NFPA 102	Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures
NFPA 105	Standard for the Installation of Smoke Door Assemblies
NFPA 110	Standard for Emergency and Standby Power Systems
NFPA 111	Standard on Stored Electrical Energy Emergency and Standby Power Systems
NFPA 115	Standard on Laser Fire Protection
NFPA 120	Standard for Coal Preparation Plants
NFPA 121	Standard on Fire Protection for Self-Propelled and Mobile Surface Mining Equipment
NFPA 122	Standard for Fire Prevention and Control in Underground Metal and Nonmetal Mines
NFPA 123	Standard for Fire Prevention and Control in Underground Bituminous Coal Mines
NFPA 130	Standard for Fixed Guideway Transit and Passenger Rail Systems
NFPA 140	Standard on Motion Picture and Television Production Studio Soundstages and Approved Production Facilities
NFPA 150	Standard on Fire Safety in Racetrack Stables
NFPA 160	Standard for Flame Effects Before an Audience
NFPA 170	Standard for Fire Safety Symbols
NFPA 203	Guide on Roof Coverings and Roof Deck Constructions
NFPA 204	Standard for Smoke and Heat Venting
NFPA 211	Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances
NFPA 214	Standard on Water-Cooling Towers
NFPA 220	Standard on Types of Building Construction
NFPA 221	Standard for Fire Walls and Fire Barrier Walls
NFPA 225	Model Manufactured Home Installation Standard
NFPA 230	Standard for the Fire Protection of Storage
NFPA 232	Standard for the Protection of Records
NFPA 241	Standard for Safeguarding Construction, Alteration, and Demolition Operations

NFPA 251	Standard Methods of Tests of Fire Endurance of Building Construction and Materials
NFPA 252	Standard Methods of Fire Tests of Door Assemblies
NFPA 253	Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
NFPA 255	Standard Method of Test of Surface Burning Characteristics of Building Materials
NFPA 256	Standard Methods of Fire Tests of Roof Coverings
NFPA 257	Standard on Fire Test for Window and Glass Block Assemblies
NFPA 258	Recommended Practice for Determining Smoke Generation of Solid Materials
NFPA 259	Standard Test Method for Potential Heat of Building Materials
NFPA 260	Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture
NFPA 261	Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes
NFPA 262	Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces
NFPA 265	Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Coverings on Full Height Panels and Walls
NFPA 268	Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source
NFPA 269	Standard Test Method for Developing Toxic Potency Data for Use in Fire Hazard Modeling
NFPA 270	Standard Test Method for Measurement of Smoke Obscuration Using a Conical Radiant Source in a Single Closed Chamber
NFPA 271	Standard Method of Test for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
NFPA 272	Standard Method of Test for Heat and Visible Smoke Release Rates for Upholstered Furniture Components or Composites and Mattresses Using an Oxygen Consumption Calorimeter
NFPA 273	Standard Method of Test for Determining the Degrees of Combustibility of Building Materials
NFPA 274	Standard Test Method to Evaluate Fire Performance Characteristics of Pipe Insulation
NFPA 284	Standard Test Method for Mattresses for Correctional Occupancies
NFPA 285	Standard Method of Test for the Evaluation of Flammability Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components Using the Intermediate-Scale, Multistory Test Apparatus
NFPA 286	Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth

NFPA 287	Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus (FPA)
NFPA 288	Standard Method of Fire Tests of Floor Fire Door Assemblies Installed Horizontally in Fire Resistance Rated Floor Systems
NFPA 289	Standard Method of Fire Test for Room Fire Growth Contribution of Individual Fuel Packages
NFPA 290	Standard for Fire Testing of Passive Protection Materials for Use on LP-Gas Containers
NFPA 291	Recommended Practice for Fire Flow Testing and Marking of Hydrants
NFPA 301	Code for Safety to Life from Fire on Merchant Vessels
NFPA 302	Fire Protection Standard for Pleasure and Commercial Motor Craft
NFPA 303	Fire Protection Standard for Marinas and Boatyards
NFPA 306	Standard for the Control of Gas Hazards on Vessels
NFPA 307	Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves
NFPA 312	Standard for Fire Protection of Vessels During Construction, Repair, and Lay-Up
NFPA 318	Standard for the Protection of Semiconductor Fabrication Facilities
NFPA 326	Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair
NFPA 329	Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases
NFPA 385	Standard for Tank Vehicles for Flammable and Combustible Liquids
NFPA 402	Guide for Aircraft Rescue and Fire Fighting Operations
NFPA 403	Standard for Aircraft Rescue and Fire Fighting Services at Airports
NFPA 405	Recommended Practice for the Recurring Proficiency Training of Aircraft Rescue and Fire-Fighting Services
NFPA 407	Standard for Aircraft Fuel Servicing
NFPA 408	Standard for Aircraft Hand Portable Fire Extinguishers
NFPA 409	Standard on Aircraft Hangars
NFPA 410	Standard on Aircraft Maintenance
NFPA 412	Standard for Evaluating Aircraft Rescue and Fire Fighting Foam Equipment
NFPA 414	Standard for Aircraft Rescue and Fire Fighting Vehicles
NFPA 415	Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways
NFPA 418	Standard for Heliports
NFPA 422	Guide for Aircraft Accident Response
NFPA 423	Standard for Construction and Protection of Aircraft Engine Test Facilities
NFPA 424	Guide for Airport/Community Emergency Planning
NFPA 430	Code for the Storage of Liquid and Solid Oxidizers
NFPA 432	Code for the Storage of Organic Peroxide Formulations
NFPA 434	Code for the Storage of Pesticides
NFPA 450	Guide for Emergency Medical Services and Systems

NFPA 471	Recommended Practice for Responding to Hazardous Materials Incidents
NFPA 472	Standard for Professional Competence of Responders to Hazardous Materials Incidents
NFPA 473	Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents
NFPA 484	Standard for Combustible Metals, Metal Powders, and Metal Dusts
NFPA 490	Code for the Storage of Ammonium Nitrate
NFPA 495	Explosive Materials Code
NFPA 496	Standard for Purged and Pressurized Enclosures for Electrical Equipment
NFPA 497	Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas
NFPA 498	Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives
NFPA 499	Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas
NFPA 501	Standard on Manufactured Housing
NFPA 501A	Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities
NFPA 502	Standard for Road Tunnels, Bridges, and Other Limited Access Highways
NFPA 505	Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operation
NFPA 520	Standard on Subterranean Spaces
NFPA 550	Guide to the Fire Safety Concepts Tree
NFPA 551	Guide for the Evaluation of Fire Risk Assessments
NFPA 555	Guide on Methods for Evaluating Potential for Room Flashover
NFPA 556	Guide on Methods for Evaluating Fire Hazard and Fire Risk of Vehicular Furnishing
NFPA 560	Standard for the Storage, Handling, and Use of Ethylene Oxide for Sterilization and Fumigation
NFPA 600	Standard on Industrial Fire Brigades
NFPA 601	Standard for Security Services in Fire Loss Prevention
NFPA 610	Guide for Emergency and Safety Operations at Motorsports Venues
NFPA 654	Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids
NFPA 655	Standard for Prevention of Sulfur Fires and Explosions
NFPA 664	Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
NFPA 701	Standard Methods of Fire Tests for Flame Propagation of Textiles and Films
NFPA 703	Standard for Fire Retardant Impregnated Wood and Fire Retardant Coatings for Building Materials

NFPA 704	Standard System for the Identification of the Hazards of Materials for Emergency Response
NFPA 705	Recommended Practice for a Field Flame Test for Textiles and Films
NFPA 720	Recommended Practice for the Installation of Household Carbon Monoxide (CO) Warning Equipment
NFPA 730	Guide for Electronic Premises Security
NFPA 731	Standard for the Installation of Electronic Premises Security Systems
NFPA 750	Standard on Water Mist Fire Protection Systems
NFPA 780	Standard for the Installation of Lightning Protection Systems
NFPA 801	Standard for Fire Protection for Facilities Handling Radioactive Materials
NFPA 804	Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants
NFPA 805	Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants
NFPA 820	Standard for Fire Protection in Wastewater Treatment and Collection Facilities
NFPA 850	Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations
NFPA 851	Recommended Practice for Fire Protection for Hydroelectric Generating Plants
NFPA 853	Standard for the Installation of Stationary Fuel Cell Power Plants
NFPA 900	Building Energy Code
NFPA 901	Standard Classifications for Incident Reporting and Fire Protection Data
NFPA 906	Guide for Fire Incident Field Notes
NFPA 909	Code for the Protection of Cultural Resources
NFPA 914	Code for Fire Protection of Historic Structures
NFPA 921	Guide for Fire and Explosion Investigations
NFPA 1000	Standard for Fire Service Professional Qualifications Accreditation and Certification Systems
NFPA 1001	Standard for Fire Fighter Professional Qualifications
NFPA 1002	Standard for Fire Apparatus Driver/Operator Professional Qualifications
NFPA 1003	Standard for Airport Fire Fighter Professional Qualifications
NFPA 1006	Standard for Rescue Technician Professional Qualifications
NFPA 1021	Standard for Fire Officer Professional Qualifications
NFPA 1031	Standard for Professional Qualifications for Fire Inspector and Plan Examiner
NFPA 1033	Standard for Professional Qualifications for Fire Investigator
NFPA 1035	Standard for Professional Qualifications for Public Fire and Life Safety Educator
NFPA 1041	Standard for Fire Service Instructor Professional Qualifications
NFPA 1051	Standard for Wildland Fire Fighter Professional Qualifications
NFPA 1061	Standard for Professional Qualifications for Public Safety Telecommunicator
NFPA 1071	Standard for Emergency Vehicle Technician Professional Qualifications

NFPA 1081	Standard for Industrial Fire Brigade Member Professional Qualifications
NFPA 1122	Code for Model Rocketry
NFPA 1123	Code for Fireworks Display
NFPA 1124	Code for the Manufacture, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles
NFPA 1125	Code for the Manufacture of Model Rocket and High Power Rocket Motors
NFPA 1126	Standard for the Use of Pyrotechnics before a Proximate Audience
NFPA 1127	Code for High Power Rocketry
NFPA 1141	Standard for Fire Protection in Planned Building Groups
NFPA 1142	Standard on Water Supplies for Suburban and Rural Fire Fighting
NFPA 1143	Standard for Wildland Fire Management
NFPA 1144	Standard for Protection of Life and Property from Wildfire
NFPA 1145	Guide for the Use of Class A Foams in Manual Structural Fire Fighting
NFPA 1150	Standard on Fire-Fighting Foam Chemicals for Class A Fuels in Rural, Suburban, and Vegetated Areas
NFPA 1192	Standard on Recreational Vehicles
NFPA 1194	Standard for Recreational Vehicle Parks and Campgrounds
NFPA 1201	Standard for Developing Fire Protection Services for the Public
NFPA 1221	Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems
NFPA 1250	Recommended Practice in Emergency Service Organization Risk Management
NFPA 1401	Recommended Practice for Fire Service Training Reports and Records
NFPA 1402	Guide to Building Fire Service Training Centers
NFPA 1403	Standard on Live Fire Training Evolutions
NFPA 1404	Standard for Fire Service Respiratory Protection Training
NFPA 1405	Guide for Land-Based Fire Fighters Who Respond to Marine Vessel Fires
NFPA 1410	Standard on Training for Initial Emergency Scene Operations
NFPA 1451	Standard for a Fire Service Vehicle Operations Training Program
NFPA 1452	Guide for Training Fire Service Personnel to Conduct Dwelling Fire Safety Surveys
NFPA 1500	Standard on Fire Department Occupational Safety and Health Program
NFPA 1521	Standard for Fire Department Safety Officer
NFPA 1561	Standard on Emergency Services Incident Management System
NFPA 1581	Standard on Fire Department Infection Control Program
NFPA 1582	Standard on Comprehensive Occupational Medical Program for Fire Departments
NFPA 1583	Standard on Health Related Fitness Programs for Fire Fighters
NFPA 1584	Recommended Practice on the Rehabilitation for Members Operating at Incident Scene Operations and Training Exercises
NFPA 1600	Standard for Disaster/Emergency Management and Business Continuity Programs
NFPA 1620	Recommended Practice for Pre-Incident Planning
NFPA 1670	Standard on Operations and Training for Technical Rescue Incidents

NFPA 1710	Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments
NFPA 1720	Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments
NFPA 1851	Standard on Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles
NFPA 1852	Standard on Selection, Care, and Maintenance of Open-Circuit SCBA
NFPA 1901	Standard for Automotive Fire Apparatus
NFPA 1906	Standard for Wildland Fire Apparatus
NFPA 1911	Standard for Service Tests of Fire Pump Systems on Fire Apparatus
NFPA 1912	Standard for Fire Apparatus Refurbishing
NFPA 1914	Standard for Testing Fire Department Aerial Devices
NFPA 1915	Standard for Fire Apparatus Preventative Maintenance Program
NFPA 1925	Standard on Marine Fire Fighting Vessels
NFPA 1931	Standard on Design of and Design Verification Tests for Fire Department Ground Ladders
NFPA 1932	Standard on Use, Maintenance and Service Testing of Fire Department Ground Ladders
NFPA 1936	Standard on Powered Rescue Tool Systems
NFPA 1951	Standard on Protective Ensemble for USAR Operations
NFPA 1961	Standard for Fire Hose
NFPA 1962	Standard for the Inspection, Care and Use of Fire Hose, Couplings and Nozzles; and the Service Testing of Fire Hose
NFPA 1963	Standard for Fire Hose Connections
NFPA 1964	Standard for Spray Nozzles
NFPA 1965	Standard for Fire Hose Appliances
NFPA 1971	Standard on Protective Ensemble For Structural Fire Fighting
NFPA 1975	Standard on Station/Work Uniforms for Fire and Emergency Services
NFPA 1976	Standard on Protective Ensemble for Proximity Fire Fighting
NFPA 1977	Standard on Protective Clothing and Equipment for Wildland Fire Fighting
NFPA 1981	Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services
NFPA 1982	Standard on Personal Alert Safety Systems (PASS)
NFPA 1983	Standard on Fire Service Life Safety Rope and System Components
NFPA 1989	Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection
NFPA 1991	Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies
NFPA 1992	Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies
NFPA 1994	Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents
NFPA 1999	Standard on Protective Clothing for Emergency Medical Operations

NFPA 2001	Standard on Clean Agent Fire Extinguishing Systems
NFPA 2010	Standard on Aerosol Fire Extinguishing Systems
NFPA 2112	Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire
NFPA 2113	Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire
NFPA 5000	NFPA Building Construction and Safety Code

SAMPLE AGREEMENTS

CA No.

COOPERATIVE AGREEMENT DOCUMENTING A FIRE-FIGHTING ASSISTANCE RELATIONSHIP

Between

(Insert Park name)

and

(Insert fire department name)

I. BACKGROUND

A. Purpose

The purpose of this Cooperative Agreement (hereinafter "CA") is to provide personal services and equipment required for prevention/suppression of structural and fires and the protection of life and property from these fires within insert park name (hereinafter "Park"). The Park will respond in kind, within limits, to requests from nearby fire prevention agencies.

B. Authority

1. Statutes 42 USC 1856 and 16 USC lb (1) provide authority for the National Park Service (hereinafter "NPS") to enter into reciprocal agreements and to render emergency fire fighting and cooperative assistance to nearby fire prevention agencies to extinguish fires and preserve life and property.

2. The Chief of the insert fire department name (hereinafter "Department") has signature authority to enter into agreements with the Park regarding fire prevention and suppression services on Park-administered land.

3. The Park Superintendent has signature authority to enter into agreements with the Department regarding fire prevention and

suppression services on Park- administered land and to provide reciprocal assistance.

II. STATEMENTS OF WORK

A. Fire on Park-Administered Land

In the event of a structural, vehicular, hazardous materials incident on Park Administered land:

1. The Department agrees to:

a. Immediately notify the Park of such a fire, by contacting the Park by phone or through insert Park-specific notification procedures.

b. Respond to the fire with a minimum of one pumper unit, if available, and a qualified crew, unless notified by the Park that such resources are not needed. The definition of "qualified crew" is a crew that meets or exceeds state fire certifications standards.

c. Cooperate with the Park staff in the immediate suppression of all structural, vehicular or hazardous material incidents.

d. Cooperate with the Park under a Unified Incident Command, by assuming the Incident Commander role on fires involving vehicles, structures or hazardous materials.

e. Recognize that Park/NPS policies and requirements, especially those concerning the use of vehicles and other equipment off of roadways, may necessitate using fire-fighting procedures that differ from Department procedures.

f. The Department agrees to adhere to Park/NPS requirements when requested to do so by the Park Superintendent or a designated representative.

g. When suppressing any type of fire, the Department agrees, insofar as is possible, to maintain the point of origin for the purpose of investigation by NPS personnel.

h. The department agrees to provide the Park technical assistance within its ability to assist with water distribution flow testing, building inspections, and code compliance

i. When suppressing fires near or within historical structures or structures containing museum collections, the Department agrees to modify its suppression tactics in order minimize damage to collections and historical fabric.

2. The Park agrees to:

a. Immediately notify the Department of a fire by contacting the 911 Emergency Dispatch.

b. Cooperate with the Department under a Unified Incident Command structure. The Department will assume the lead role in fires involving vehicles, structures or hazardous materials.

c. Provide qualified fire fighting personnel to assist with suppression of wildland fires; or in cases of structural, vehicular or hazardous materials fires, to assist only with hose lays and pumper operations.

d. Provide traffic control and emergency medical assistance for injured persons in either type of fire.

e. Conduct walk-through inspections for the Department to familiarize Department personnel with building floor plans and sensitive areas, to include museum collections and buildings of historical significance.

f. Solicit and accept recommendations from Department command personnel in suppression and rescue procedures, insofar as they do not conflict with Park/NPS policies. For the purpose of this CA, Department command personnel are:

1) Fire Chief

2) Battalion Chief

3) Captain

B. Fire Adjacent to Exterior Park Boundaries

In the event of a fire on land adjacent to the Park boundary:

1. The Park agrees to:

   a. Respond to any emergency request from the Department with qualified fire fighters to assist with hose lays and pamper operations on structural fires within 1 mile of the Park boundary. The 1-mile limit may be extended on the approval of the Park Superintendent or designated representative.

   b. Provide fire suppression assistance for fires that threaten the park or are within 1 mile of the Park boundary.

   c. Provide traffic control and/or emergency medical assistance for injured persons in either type of fire.

   d. Recognize and follow orders from the Department command personnel or the appropriate city/state authority.

   e. The Park will maintain all existing and all new alarm systems in buildings to the National Fire Protection Association (NFPA) Life Safety Code. Trained personnel shall be available on a 24-hour basis to repair all such systems. Repairs must be completed within 12 hours of initial report of deficiencies.

2. The Department agrees to:

Establish a clear command structure and provide orders and instructions to Park personnel.

C. Operations

1. Department personnel and equipment will be activated as follows:

   a. Emergencies - The Park will request emergency assistance by contacting the Department Dispatcher at: 911

   b. Business - The Park will initiate business contacts by calling the Department Dispatcher or Chief at: insert department's phone number; or by calling the 911 Dispatch

non-emergency number at: insert phone number; or alternate contact procedure.

2. Park personnel and equipment will be activated as follows:

   a. The Department will request emergency assistance by contacting the Park through insert contact method and appropriate phone number. This is a 24-hour dispatch and Park personnel will be notified at any time.

   b. Business - The Department will initiate business contacts by calling: Insert name, position and phone number(s).

D. Cooperative Provisions

The Park and the Department mutually agree to the following:

1. In the execution of this CA, employees or agents of the Department are not considered employees of the Park or NPS.

2. No party to this agreement shall be bound to make any expenditure under this Cooperative Agreement, except as may be authorized by law.

3. The Park and the Department waive all claims against each other for compensation for any loss, damage, personal injury or death occurring as a consequence of activities pursuant to this Cooperative Agreement.

4. All fire suppression-qualified Park personnel will meet, as a minimum, the requirements found in Director's Order 18 and Reference Manual 18.

5. All fire suppression-qualified Department personnel will meet the minimum requirements of the Department.

6. The respective parties of this CA will provide personal protective equipment (PPE) for their employees.

7. Both parties will participate in joint training exercises/drills in areas covered by this CA at least biannually.

8. Both parties will review this CA annually to update changes in Park or Department personnel or phone numbers, and will provide the other party with a list of any changes made.

9. Both parties grant permission to each other to monitor the radio frequencies of the other and communicate as needed.

III. AGREEMENT EVALUATION

The parties will jointly review the results and effectiveness of this CA at the end of each calendar year. The CA may be amended at any time by the written, mutual consent of the parties. The approved amendment(s) will immediately become a part of this CA.

IV. ARTICLE IV - KEY OFFICIALS

NATIONAL PARK SERVICE Insert fire department name

V. AWARD

The NPS will obligate the amount of insert monetary amount to insert fire department name in accordance with the attached budget, through account number insert account number. All work performed by the Cooperator is outlined in the attached budget, made part of this agreement.

An SF 270 must be submitted for payment to the Contracting Officer, National Park Service, Contracting and Procurement Office, insert address. Financial status reports and final documents will be provided by insert fire department name at the same address. The Cooperative Agreement number and any applicable modification numbers should be cited. Any future modifications to this CA will be mutually agreed upon and executed in writing by both parties and the Contracting Officer, based on the allocation of funds by Congress.

VI. TERM OF THE COOPERATIVE AGREEMENT

This CA shall be in effect for a period of five (5) years, commencing on the date of signature of the Park Superintendent.

VII. REPORTS

A. The respective parties of this CA are responsible for their own timekeeping and other required records and reports.

B. The Department agrees to assist the park in the completion of the NPS fire report as it relates to origin and cause and estimated damages.

VIII. TERMINATION

This CA may be terminated by either party by providing written notice to the other party sixty (60) days in advance of the termination.

IX. ATTACHMENTS

A. The following attachments are included as a part of this document:

1. A list of the equipment that insert department's name will offer to the Park if it is needed.

2. A cooperative vicinity map of the Park that shows building and hydrant locations.

3. Building diagrams for all Park structures to include the location of all hazardous materials.

4. Alarm company name, phone number and notification procedures.

X. REQUIRED CLAUSES

A. NON-DISCRIMINATION: All activities pursuant this agreement and the provisions of Executive Order 1 1246; shall be in compliance with requirements of Title VI of the Civil Rights Act of 1 964 (78 Stat. 252 42 U.S.C. § 2000d _et se~q.); Title V, Section 504 of the Rehabilitation Act of 1973 (87 Stat. 394; 29 U.S. C. §794); the Age Discrimination Act of 1975 (89 Stat. 728; 42 U.S.C. § §6101 et seq.); and with all other Federal laws and regulations prohibiting discrimination on grounds of race, color, national origin, handicap, religion or gender in providing of facilities and services to the public.

B. CONSISTENCY WITH PUBLIC LAWS: Nothing contained in this agreement shall be deemed to be inconsistent with or contrary to the purpose of or intent of any Act of Congress establishing, affecting, or relating to the Agreement.

C. APPROPRIATIONS (Anti-Deficiency Act, 31 U.S.C. 1341)**:** Nothing contained in this Agreement shall be construed as binding the Service to expend in any one fiscal year any sum in excess of appropriations made by Congress, for the purposes of this Agreement for that fiscal year, or other obligation for the further expenditure of money in excess of such appropriations.

D. OFFICIALS NOT TO BENEFIT: No Member of, Delegate to, Resident Commissioner in, Congress shall be admitted to any share or part of this Agreement or to any benefit to arise there from, unless the share or part benefit is for the general benefit of a corporation or company.

E. LOBBYING PROHIBITION: The parties will abide by the provisions of 18 U.S.C. 1913 (Lobbying with Appropriated Moneys), which states:

"No part of the money appropriated by any enactment of Congress shall, in the absence of express authorization by Congress, be used directly or indirectly to pay for any personal service, advertisement, telegram, telephone, letter, printed or written matter, or other device, intended or designed to influence in any manner a Member of Congress, to favor or oppose, by vote or otherwise, any legislation or appropriation by Congress, whether before or after the introduction of any bill or resolution proposing such legislation or appropriation: but this shall not prevent officers or employees of the United States or of its departments or agencies from communicating to Members of Congress on the request of any Member or to Congress, through the proper official channels, requests for legislation or appropriations which they deem necessary for the efficient conduct of the public business."

F. MINORITY BUSINESS ENTERPRISE DEVELOPMENT (Executive Order 12432)**:** "It is the national policy to award a fair share of contracts to small and minority firms. The National Park Service is strongly committed to the objectives of this policy and encourages all recipients of its Cooperative Agreements to take affirmative steps to ensure such fairness " by ensuring procurement procedures are carried out in accordance with 43 CFR12.944 for Institutions of Higher Education, Hospitals and Other Non-Profit Organizations, and 43 CFR 12.76 for State and Local Governments.

G. LIABILITY PROVISION: The Parties accept responsibility for any property damage, injury or death, caused by the acts or omissions of their respective employees, acting within the scope of their employment, to the fullest extent permitted by law.

_____ _____
NPS-Contracting Officer Date

_____ _____
Superintendent Date

_____ _____
Fire Chief Date

GA No.

GENERAL AGREEMENT DOCUMENTING A FIRE-FIGHTING ASSISTANCE RELATIONSHIP

Between

(Insert Park name)

and

(Insert fire department name)

I. BACKGROUND

A. Purpose

The purpose of this General Agreement (hereinafter "GA") is to provide personal services and equipment required for prevention/suppression of vehicle, structural fires and the protection of life and property from these fires within insert Park name (hereinafter "Park"). The Park will respond in kind, within limits, to requests from nearby fire prevention agencies.

B. Authority

1. Statutes 42 USC 1856 and 16 USC lb (1) provide authority for the National Park Service (hereinafter NPS) to enter into reciprocal agreements and to render emergency fire fighting and Cooperative assistance to nearby fire prevention agencies to extinguish fires and preserve life and property.

2. The Chief of the insert fire department name (hereinafter "Department") has signature authority to enter into agreements with the Park regarding fire prevention and suppression services on Park-administered land.

3. The Park Superintendent has signature authority to enter into agreements with the Department regarding fire prevention and suppression services on Park- administered land, and to provide reciprocal assistance.

II. STATEMENTS OF WORK

A. Fire on Park-Administered Land

In the event of a structural, vehicular, hazardous materials or wildland fire on Park Administered land:

1. The Department agrees to:

   a. Immediately notify the Park of such a fire, by contacting the Park by phone through insert Park-specific notification procedures.

   b. Respond to the fire with a minimum of one pumper unit, if available, and a qualified crew, unless notified by the Park that such resources are not needed. The definition of "qualified crew" is a crew that meets or exceeds state fire certifications standards.

   c. Cooperate with the Park staff in the immediate suppression of all structural, vehicular or hazardous material incidents and all wildland fires.

   d. Cooperate with the Park under a Unified Incident Command, by assuming the Incident Commander role on fires involving vehicles, structures or hazardous materials.

   e. Recognize that Park/NPS policies and requirements, especially those concerning the use of vehicles and other equipment off of roadways, may necessitate using fire-fighting procedures that differ from Department procedures.

   f. When suppressing any type of fire, the Department agrees, insofar as is possible, to maintain the point of origin for the purpose of investigation by NPS personnel.

   g. The department agrees to provide the Park technical assistance within its ability to assist with water distribution flow testing, building inspections/ code compliance

   h. When suppressing fires near or within historical structures or structures containing museum collections, the Department agrees to modify its suppression tactics in order minimize damage to collections and historical fabric.

2. The Park agrees to:

   a. Immediately notify the Department of a fire by contacting the insert procedure or title and phone numbers.

   b. The Department will assume the lead role in fires involving vehicles, structures or hazardous materials.

   c. Provide qualified wildland fire fighting personnel to assist with suppression of wildland fires; or in cases of structural, vehicular or hazardous materials fires, to assist only with hose lays and pumper operations.

   d. Provide traffic control and emergency medical assistance for injured persons in either type of fire.

   e. Conduct walk-through inspections for the Department to familiarize Department personnel with building floor plans and sensitive areas, to include museum collections and structures of historical significance.

   f. Solicit and accept recommendations from the Department command personnel in suppression and rescue procedures, insofar as they do not conflict with Park/NPS policies. For the purpose of this GA, Department command personnel are:

      1) Fire Chief

      2) Battalion Chief

      3) Captain

B. Fire Adjacent to Exterior Park Boundaries

In the event of a fire on land adjacent to the Park boundary:

1. The Park agrees to:

   a. Respond to any emergency request from the Department with qualified fire fighters to assist with hose lays and pumper operations on structural fires within 1 mile of the Park boundary. The 1-mile limit may be extended on the approval of the Superintendent or designated representative.

b. Provide traffic control and/or emergency medical assistance for injured persons in either type of fire.

c. Recognize and follow orders from the Department command personnel or appropriate city/state authority.

d. The Park will maintain all existing and all new alarm systems in buildings to the National Fire Protection Association (NFPA) Life Safety Code. Trained personnel shall be available on a 24-hour basis to repair all such systems. Repairs must be completed within 12 hours of initial report of deficiencies.

2. The Department agrees to:

Establish a clear command structure and provide orders and instructions to Park personnel.

C. Operations

1. Department personnel and equipment will be activated as follows:

a. Emergencies - The Park will request emergency assistance by contacting the Department Dispatcher insert number

b. Business - The Park will initiate business contacts by calling the Department Dispatcher or Chief at: insert department's phone number or by calling the 911 Dispatch non-emergency number at: insert phone number or alternate contact procedure.

2. Park personnel and equipment will be activated as follows:

a. The Department will request emergency assistance by contacting the Park through <u>insert contact method and pertinent phone numbers.</u> This is a 24-hour dispatch and Park personnel will be notified at any time.

b. Business - The Department will initiate business contacts by calling: <u>Insert appropriate name and phone numbers.</u>

D. General Provisions

1. The Park and the Department mutually agree to the following:

a. In the execution of this GA, employees or agents of the Department are not considered employees of the Park or NPS.

b. No party to this agreement shall be bound to make any expenditure under this GA, except as may be authorized by law.

c. The Park and the Department waive all claims against each other for compensation for any loss, damage, personal injury or death occurring as a consequence of activities pursuant to this Agreement.

d. All fire suppression-qualified Park personnel will meet, at a minimum, the requirements found in Director's Order and Reference Manual 18.

e. All fire suppression-qualified Department personnel will meet the minimum requirements of the Department.

f. The respective parties of this GA will provide personal protective equipment (PPE) for their employees.

g. Both parties will participate in joint training exercises/drills in areas covered by this GA, at least biannually.

h. Both parties will review this GA annually to update changes in Park or Department personnel or phone numbers and provide the other party with a list of any changes made.

i. Both parties grant permission to each other to monitor the radio frequencies of the other and communicate as needed.

III. AGREEMENT EVALUATION

The parties will jointly review the results and effectiveness of this GA at the end of each calendar year. The GA may be amended at any time with the written, mutual consent of the parties. The approved amendment(s) will immediately become part of this GA.

IV. TERM OF THE GENERAL AGREEMENT

This GA shall be in effect for a period of five (5) years, commencing on the date of signature of the Park Superintendent.

V. KEY OFFICIALS

A. Park - The Superintendent has the authority and responsibility for managing this GA on behalf of the Park. He/she may be contacted at insert phone numbers.

B. Department - The Chief has the authority and responsibility for managing this GA on behalf of the Department. He/she may be contacted at insert phone numbers.

VI. REPORTS

A. The respective parties to this General Agreement are responsible for their own timekeeping and other required records and reports.

B. The Department agrees to assist the Park in the completion of the NPS Fire Report as it relates to origin, cause and estimated damages.

VII. TERMINATION

This General Agreement may be terminated by either party by providing written notice to the other party sixty (60) days in advance of the termination.

VIII. ATTACHMENTS

The following attachments are included as a part of this document:

A. A list of the equipment that insert Department's name will offer to the Park if it is needed.

B. A general vicinity map of the Park that shows building and hydrant locations.

C. Building diagrams for all Park structures to include the location of all hazardous materials.

D. Alarm company name, phone number and notification procedures.

IX. REQUIRED CLAUSES

A. NON-DISCRIMINATION: All activities pursuant this agreement and the provisions of Executive Order 1 1246; shall be in compliance with requirements of Title VI of the Civil Rights Act of 1 964 (78 Stat. 252 42 U.S.C. § 2000d et se~q.); Title V, Section 504 of the Rehabilitation Act of 1973 (87 Stat. 394; 29 U.S. C. §794); the Age Discrimination Act of 1975

(89 Stat. 728; 42 U.S.C. § §6101 et seq.); and with all other Federal laws and regulations prohibiting discrimination on grounds of race, color, national origin, handicap, religion or gender in providing of facilities and service to the public.

B. CONSISTENCY WITH PUBLIC LAWS: Nothing herein contained shall be deemed to be inconsistent with or contrary to the purpose of or intent of any Act of Congress establishing, affecting, or relating to the Agreement.

C. APPROPRIATIONS (Anti-Deficiency Act, 31 U.S.C. 1341)**:** Nothing herein contained in this Agreement shall be construed as binding the Service to expend in any one fiscal year any sum in excess of appropriations made by Congress, for the purposes of this Agreement for that fiscal year, or other obligation for the further expenditure of money in excess of such appropriations.

D. OFFICIALS NOT TO BENEFIT: No Member of, Delegate to, Resident Commissioner in, Congress shall be admitted to any share or part of this Agreement or to any benefit to arise there from, unless the share or part benefit is for the general benefit of a corporation or company.

E. LIABILITY PROVISION: The Parties accept responsibility for any property damage, injury or death, caused by the acts or omissions of their respective employees, acting within the scope of their employment, to the fullest extent permitted by law.

_____ _____
Superintendent Date

_____ _____
Fire Chief Date

SAMPLE

MEMORANDUM OF UNDERSTANDING
FOR CONCESSION STRUCTURAL, VEHICULAR, AND HAZARDOUS MATERIALS FIRE COOPERATION

Between

(Insert Park name)

And

(Insert Concessionaire's name)

This Memorandum of Understanding is entered into, by, and between the insert concessionaire name, (hereinafter referred to as "Concessionaire") and insert Park name, of the National Park Service, U.S. Department of the Interior (hereinafter referred to as "Service").

I. BACKGROUND AND OBJECTIVES

WHEREAS, the Service is mandated under 16 U.S.C 1a-6 to maintain law and order and protect persons and property within the areas of the National Park System; and,

WHEREAS, the Service, through the exclusive provisions of the Special Maritime and Territorial Jurisdiction of the United States, has responsibility for protection and management of lands in the National Park System, and for enforcement of both Federal and State laws, rules and regulations, within such system; and

WHEREAS, both parties desire to cooperate in structural fire prevention and suppression and agree that such cooperation will result in a reduction of response time and cost to the public, and will promote the general welfare, public safety, and enjoyment of the area by establishing a consistent and uniform application of structural fire suppression; and

WHEREAS, the Concessionaire and the Service believe it is in their mutual interest and benefit to cooperate;

Now, THEREFORE, the parties hereto agree as follows:

II. STATEMENTS OF WORK

A. The Service agrees:

1. To manage Park-wide structural fire brigades.

2. To provide required training opportunities to Concessionaire employees and Service employees that meet NPS and NFPA requirements for volunteer fire brigades.

3. To provide all fire suppression equipment and be responsible for repairs and maintenance on said equipment.

4. To provide structural fire incident notification procedures to Service emergency services and Concessionaire emergency services for response.

5. To provide clear command structure and provide orders and instructions to all structural fire personnel.

6. To conduct all investigations of cause determination.

B. The Concessionaire agrees:

1. To maintain and operate its facilities in such a manner as the Service may deem satisfactory for fire suppression and prevention.

2. To follow all National Fire Codes, and to provide the equipment, and qualified personnel, deemed necessary by the Service to meet this responsibility as required by the concession contract.

3. To contact, when requested by the NPS, available qualified concessionaire personnel to assist in the suppression of structural, vehicular, and hazardous material fires.

4. To immediately contact the Service to report any fire or incident by <u>insert contact method and pertinent phone numbers.</u> This is a 24-hour dispatch and Park personnel will be notified at any time.

5. To allow concession volunteer fire brigade members time to be away from their primary duties for necessary training. While in training status, all structural fire fighters will be covered by either federal volunteer status when off concession work duties, or concession work status when on concession duties.

C. Both parties agree that:

1. They will provide traffic control and or emergency medical assistance for injured persons in any type of fire.

2. All fire suppression-qualified Service personnel will meet, as a minimum, the requirements of the Director's Order 58 and Reference Manual 58.

3. Any active structural fire brigade member, including workers under the Federal Volunteer program, "Administratively Determined Pay" status or federal employee plan, who is involved in the execution of any fire response and acting with in the scope of their assigned responsibility, will have benefits and protection coverage as stated in the Federal Employees Compensation Act (5 U.S.C., 81).

4. At a minimum, an annual meeting shall be held, at a date and time agreeable to both parties, to review this Agreement and all clauses relating thereto. At such time, an annual operation plan will be formalized regarding training, qualification and incident response guidelines.

III. TERM OF AGREEMENT

Unless earlier terminated pursuant to Article VI below, this Agreement shall become effective on the date of the final signature, and shall continue in full force and effect for a period of not to exceed five (5) years. At the end of five (5) years, the agreement may be extended another five (5) years upon agreement of the signatories.

This Agreement may be modified only by the written mutual agreement of both parties.

IV. KEY OFFICIALS

For the Service, the key officials shall be the Park Superintendent, insert Park name and address.

For the Concessionaire, the key official shall be insert title, name, and address of the Concessionaire or his/her designee.

V. FINANCING

This Agreement does not contemplate or authorize the transfer of any funds from one party to another. Nothing in this Agreement shall be construed as obligating the Service or the Concessionaire to expend any funds in excess of appropriations authorized by law.

VI. INDEMNIFICATION

As a federal agency, the National Park Service agrees to cooperate, to the extent allowed by law, in the submission of claims pursuant to the Federal Tort Claims Act

against the United States by third parties for personal injury or property damage resulting from the negligent act or omission of any employee of the United States in the course of his employment during the performance of this Agreement.

VII. TERMINATION

Either party may terminate this Agreement upon sixty (60) days written notice to the other party.

VIII. ATTACHMENTS

The following attachment is included as part of this document:

Include a fire brigade training, qualifications and minimum staffing document.
Note: All Concession Volunteer fire fighters must have completed the duties and qualifications listed on the Agreement for Individual Voluntary Services, Form 10-58. (This list of duties is contained in this Appendix – see the last page.)

IX. REQUIRED CLAUSES

CIVIL RIGHTS: During the performance of this agreement, the participants agree to abide the terms of the USDI-Civil Rights Assurance Certification, non-discrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

OFFICIALS NOT TO BENEFIT: No member or delegate to Congress, or resident Commissioner, shall be admitted to any share or part of this agreement, or to any benefit that may arise there from, but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

PUBLIC INFORMATION RELEASE: The concessionaire must obtain prior Government approval from the Service for any public information releases which refer to the Department of the Interior, any bureau, park unit, or employee (by name or title), or this Agreement. The specific text, layout, photographs, etc., of the proposed release must be submitted with the request for approval.

X. AUTHORIZING SIGNATURES

In WITNESS HEREOF, a representative of each party to this agreement has signed his/her name to execute this Memorandum of Understanding.

For insert Concessionaire name:

_____ Date _____
Name, (Insert Concessionaire's title)

For insert Park's name:

_____ Date _____
Name, Park Superintendent

ATTACHMENT SAMPLE

Volunteers as Structural Fire Personnel

References are made in NPS 58 ("Structural Fire") Chapter 3, page 2 on the use of volunteers for hazardous duty; and NPS 7 ("VIPs"), Chapter 1, pages 11-12 on benefits and protections.

Because of coverage that VIPs receive, it is imperative that they are properly assigned, and operating under written job descriptions that contain specific details about the type(s) of work they are assigned to do. This is necessary in case questions arise about whether a VIP was acting within their assigned responsibilities.

REPORTING PROCEDURES

LEVEL 1 AND LEVEL 2 INCIDENT REPORTING REQUIREMENTS

Each of the following Level 1 and Level 2 reporting Standard Operating Procedures explains how to submit reports.

- Level 1 reports, and some particularly significant Level 2 reports, are called immediately to Shenandoah NP dispatch, and then followed up with written reports sent via cc:mail within three (3) working days.
- Level 2 reports are submitted via cc:mail within three (3) working days.
- All Level 1 and 2 written reports are submitted to Dennis Burnett in WASO Ranger Activities and to Bill Halainen at Delaware Water Gap NRA.
- Copies of each should also be sent to your regular regional/system office contacts.

LEVEL 1 REPORTS

- Report immediately by phone; follow-up with cc:mail within three (3) working days.
- Call Shenandoah 24-hour dispatch at 1-540-999-3422.
- If for some reason Shenandoah dispatch cannot be reached, call Dennis Burnett via pager at 1-888-992-5811 and follow the instructions on leaving a message.
- Submit follow-up reports via cc:Mail to Dennis Burnett in WASO Ranger Activities and Bill Halainen at Delaware Water Gap NRA.
- Reports should also be sent to your regular regional/system office contacts.

1.1 **Employee Fatalities:** All employee deaths from any cause, whether on the job or off-duty.

1.2 **High Property Damage:** Any incident resulting in property damage in excess of $100,000.

1.3 **Officer Fatality or Life-Threatening Injury:** The death or life-threatening injury to any law enforcement employee while in the performance of his or her duties.

1.4 **Serious Crimes:** Serious crimes, which occur in any Park area.

1.5 **Drug Incidents:** Major or unusual drug seizures or drug-related arrests in which the circumstances, value, and/or the amount of the seizure could attract media or political attention.

1.6 **Political Officials:** Serious incidents, major events or serious accidents involving senior political officials of state, federal or foreign governments or their immediate families.

1.7 **Terrorist Activity:** Actual, attempted or planned terrorist activity, sabotage or other hostile acts against NPS property.

1.8 **Significant LE Events:** Significant law enforcement events other than planned special events, which have required or may require the dispatch of specially-trained teams to augment normal enforcement capabilities.

1.9 **Disasters:** Major natural or man-caused disasters, which cause significant injuries, resource or property damage to or impact on visitor use of an NPS-administered area. This includes major structural fires, dam failures, floods and storms. (Wildfires are excluded; they should be reported to the NPS Fire Director in Boise).

1.10 **Weapons Discharge:** The discharge of a weapon by an employee toward another individual or any discharge of a weapon at any employee.

1.11 **Use of Force:** Any use of force by a law enforcement officer, which results in serious injury or death to another individual.

1.12 **Aircraft Accidents:** Any aircraft accident causing a death or hospitalizing injury.

1.13 **Multiple Injury, Work-Related Accident:** Any incident that results in the hospitalization of three (3) or more employees due to a work-related accident.

LEVEL 2 REPORTS

- All incidents under these criteria are to be reported to WASO Ranger Activities via cc:Mail within three (3) working days of the occurrence.

- Incidents of exceptional significance (Level 2+ incidents, i.e., those that have or will likely draw major media coverage) should be reported immediately following the procedures for Level 1 reports.

- Reports should be sent via cc:Mail to Dennis Burnett in WASO Ranger Activities and Bill Halainen at Delaware Water Gap NRA.

- Copies should also be sent to your regular regional/system office contact.

2.1 **Visitor Fatalities:** Visitor fatalities, except by natural causes. Heart attacks are not reportable incidents unless they involve other Level 1 or Level 2 reporting criteria.

2.2 **Employee Injuries:** Serious injury to any employee, whether on the job or off-duty. For purposes of this reporting system, serious injuries are defined as those, which require advanced life support and/or lead to overnight hospitalization.

2.3 **Employee Arrest:** Arrest or detention of any employee on felony charges, regardless of arresting or detaining agency.

2.4 **ARPA Incidents:** Any incident which will likely lead to an Archeological Resource Protection Act (ARPA) prosecution.

2.5 **Wildlife Incidents:** Wildlife attacks or incidents, which result in serious injury (the definition is the same as in 2.2) or death to persons.

2.6 **Drug Incidents:** Drug seizures in which the value of the drugs exceeds $5,000, or major drug cases which are investigated by other agencies but which were initiated by the NPS or in which the NPS assisted.

2.7 **Missing Persons:** Confirmed missing persons where foul play is suspected.

2.8 **Felony Arrests:** Multiple felony arrests.

2.9 **Demonstrations:** Demonstrations or other hostile acts (planned, purported or actual) on or adjacent to a Park.

2.10 **Malicious Destruction:** Significant malicious damage to cultural or natural resources.

2.11 **Theft and Burglary:** Monetary losses in excess of $10,000 through theft or burglary (excluding vehicle thefts).

2.12 **Search and Rescue:** Major searches and/or rescues, generally defined as any SAR requiring a significant call-out of resources or a prolonged or difficult search.

2.13 **International Events:** Any significant event involving foreign nationals or international cooperation.

2.14 **Arson:** Any incident of known or suspected arson.

2.15 **Poaching Incidents:** Any significant animal, plant, mineral, paleontolgical or other Park natural resource poaching incident.

2.16 **Multiple Injuries:** In-patient hospitalization of five or more NPS personnel or non-NPS personnel in any single incident.

2.17 **Structural Fires:** Structural fires involving any NPS-owned property.

2.18 **Special Events:** Any event in a Park, which requires significant mobilization of resources, attracts substantial media attention, and/or has particular relevance to the National Park System or Service or its cultural, historical and natural assets.

FIRE INVESTIGATION

U.S. Bureau of Alcohol, Tobacco and Firearms FIELD OFFICE contact numbers

Atlanta	404-417-2600	Baltimore	410-779-1700
Boston	617-557-1200	Charlotte	704-716-1800
Chicago	312-353-6935	Columbus	614-469-5303
Dallas	469-227-4300	Detroit	313-259-8050
Houston	281-372-2900	Kansas City	816-559-0700
Los Angeles	213-534-2450	Louisville	502-753-3400
Miami	305-597-4800	Nashville	615-781-5364
New Orleans	504-841-7000	New York	718-650-4000
Philadelphia	215-597-7266	Phoenix	602-776-5400
San Francisco	415-744-7001	Seattle	206-220-6440
St. Paul	651-726-0200	Tampa	813-202-7300
Washington DC	202-927-8810		

AHJ	Authority Having Jurisdiction - An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure. DO 58 gives the Regional Director the responsibility as the Authority Having Jurisdiction (AHJ). This person can re-delegate to the Regional Structural Fire Management Officer (RSFMO).
Brigade	An organized group of **employees within an industrial occupancy** who are knowledgeable, trained, and skilled in at least basic fire fighting operations, and whose full-time occupation might or might not be the provision of fire suppression and related activities for their employer. This term is not applicable to NPS Engine Companies.
Driver/Operator	A person having satisfactorily completed the requirements of driver/operator as specified in NFPA 1002, Standard for Fire Apparatus Driver/Operator Professional Qualifications.
Engine Company	A group of fire fighters who work as a unit and are equipped with one or more pumping engines having rated capacities of 2840 L/min (750 gpm) or more.
Fire Apparatus	A motor-driven vehicle or group of vehicles designed and constructed for the purpose of fighting fires. Examples include fire engines, water tenders, and ladder trucks.
Fire District	Geographic response area for an NPS Engine Company.
Fire Engine	A fire department pumper having a rated capacity of 2840 L/min (750 gpm) or more.
Fire Ground Operations	Actions performed in the immediate proximity to fires or on an incident with the potential for fire.
Fire Truck	A common fire service term for aerial fire apparatus.
FPE	Fire Protection Engineer

Immediately Dangerous to Life or Health (IDLH)	Any condition that would do one of the following: (a) Pose an immediate or delayed threat to life; (b) Cause irreversible adverse health effects; (c) Interfere with an individual's ability to escape unaided from a hazardous environment. 1670 1670, 1500, 1404 preferred
ITM	Inspection, Testing, and Maintenance
NPS Certified Firefighter	NPS Employee who has successfully completed: 1) An approved course of instruction in compliance with RM 58 Chapter 14 2) NPS Firefighter Taskbook
SFAG	Structural Fire Advisory Group
Standpipes	Class I standpipe system provides 65mm (2-in) hose connections to supply water for use by fire departments and those trained in handling heavy fire streams. Class II standpipe system provides 38-mm (1-in.) hose stations to supply water for use primarily by the building occupants or by the fire department during initial response. Class III standpipe system provides 38-mm (1-in.) hose stations to supply water for use by building occupants and 65-mm (2-in.) hose connections to supply a larger volume of water for use by fire departments and those trained in handling heavy fire streams.
Structural Fire	An incident involving fire that is not classified as a wildland fire.