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NFPA 1700 Training Materials

Development of Training Materials to Support the Implementation of NFPA 1700, Guide for Structural Fire Fighting

Over the years, significant amounts of time, effort, and resources have been allocated to provide a science-based understanding of the effects & impacts of firefighting strategy and tactics on fire dynamics in structures. Much of the firefighting research has been supported by the US DHS FEMA Assistance to Firefighters Grant program. There is a high importance to get firefighters the knowledge to perform their lifesaving and critical role in fire safety. Today, firefighters are facing greater challenges, such as with modern building construction, synthetic furnishings commonly found in most structures, and new emerging hazards. Research has been conducted that is critical to saving lives and encouraging safe and efficient structural firefighting tactics and strategies. In recent years, new insights into how structural fires behave have led to some of the most significant tactical considerations the fire service has seen in decades.

To help bring this information together for local fire departments, fire service leaders proposed the development of a new NFPA guide to consolidate the science-based research on structural firefighting strategy, tactics, and tasks. This resulted in the development of NFPA 1700: Guide for Structural Fire Fighting with 2021 edition as its first issue. Both classroom and on-line training is necessary as fire departments everywhere work to implement the guidance provided by NFPA 1700. The overall goal of this project was to develop a digital training toolkit to support the implementation of NFPA 1700, Guide for Structural Fire Fighting. The following specific objectives support this overall project goal:

- Objective 1: identify, package, and develop as needed the fundamental materials for an online toolkit (e.g., using presentations, videos, multimedia, and other educational approaches) that provide the primary knowledge to support the implementation of NFPA 1700 in local fire departments.
- Objective 2: utilize emerging technology to provide an interactive and immersive educational experience that reinforces the fundamental materials.
- Objective 3: make the training materials openly available to the entire fire service in the United States and beyond.

Summary:

The principal deliverable from this project effort is a free NFPA 1700 online training course for firefighters to learn safer and more effective ways to handle fire incidents involving modern-day materials and contents. NFPA 1700 is the first NFPA document connecting fire dynamics research to firefighter response strategy, tactics, and best practices.

The course provides guidance on interacting within a burning structure to achieve the most successful outcome based on documented fire investigations, research, and testing; interactive modeling of residential structural firefighting with simulated training scenarios and coaching exercises; and concepts based on NFPA 1700 principles and tactical advice for effective search, rescue, and fire suppression operations, as well as civilian and responder safety. The online training developed is in an immersive virtual environment that offers a 360-degree, 3D experiences featuring realistic scenarios and requires the students to make observations and decisions on how to respond and fight the fire. The course includes 14 individual modules covering how to enter buildings, where to apply hose streams, and when to change strategies, based on changes in fire conditions, culminating with an exam to help firefighters synthesize learning and put knowledge to the test.

In summary, this online training is designed to help firefighters explain why firefighting tactics are changing based on modern construction, newer on-scene technology, and evolving fuel loads; understand how to assess and approach the scene of a fire based on the latest science-based fire dynamics research and testing; and be better prepared to assess a fire's growth and spread and utilize up-to-date control methods. The training considers fundamental occupancy and building construction while addressing the health and safety of firefighters by reinforcing the need for personal protective equipment and methodologies for contamination control.

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