

**A Policy Paper**

**American Fire Sprinkler Association  
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# **The Manpower Crisis and Automatic Fire Sprinklers**

**How State and Local Requirements Exacerbate  
the Manpower Crisis in the Fire Sprinkler  
Industry**

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## **How State and Local Requirements Exacerbate the Manpower Crisis in the Fire Sprinkler Industry**

### **Introduction**

There is a critical manpower crisis in the construction industry, and the shortage of workers in the installation of automatic fire sprinklers is particularly acute. At the same time, requirements for the installation of automatic sprinklers are increasing throughout the United States because fire sprinkler technology is the most effective means of saving life and property in a fire. The manpower crisis in the fire sprinkler industry threatens the public safety by delaying or discouraging the installation of automatic fire sprinklers.

Unfortunately, misguided state and local requirements frequently exacerbate the problem—especially the imposition of the licensing of sprinkler fitters and the imposition of ratios.

### **The Fallacy of Fitter Licensing**

In the vernacular of the fire sprinkler industry, a “sprinkler fitter” is an employee involved in the physical installation of the piping, fire sprinklers and associated equipment. Sprinkler fitters do not design or layout sprinkler systems. They are not involved in the selection of fire sprinkler devices or associated equipment.

As an introduction to the issue of sprinkler fitter licensing, it may be helpful to analyze when and to what extent the fitter’s contribution to the complete project falls in the sequence of providing an automatic fire sprinkler system.

1. The property owner or general contractor contacts a fire sprinkler contractor. The sprinkler contractor is the legal entity responsible for the job.
2. An estimator, employed by the contractor, prepares a proposal to install the sprinkler system(s) needed to protect the facility. The price will include layout of contract drawings, submittal of the completed layout drawings and receipt of an approved review of the layout from the AHJ. Permits, funding, bonds and overhead expenses

such as office, telephone, warranty of materials and workmanship, insurance, taxes, and employee benefits also have to be considered.

3. The contractor's designers lay out the system. They apply established codes and standards to provide an adequate level of protection based on the intended use of the building, the combustibility of the products and materials to be stored or used within the property, and the process of handling those materials.
4. Completed layout drawings are sent to the AHJ for review and verification that the standards have been properly applied. After the layout is approved, the contractor orders materials, which usually are prefabricated for the particular job and then delivered to the job site.
5. Sprinkler fitters install the sprinkler system.
6. Following installation, a pressure and activation test is witnessed by the AHJ and the contractor prepares a "Materials and Test Certificate," verifying that the materials incorporated in the system are suitable for the requirements set forth by the standards. Ordinarily, at this point, the obligations of the fitter are relieved and he or she is assigned to another project. The obligations of the contractor, however, are not over.
7. The guarantee period must be covered. Other services involving electrical connections, underground water supply, training of owner/occupant maintenance personnel, painting, inspection and maintenance schedules for the systems are to be considered.

As can be seen in this sequence of events, the sprinkler fitter has little or no contact with the owner of the property. The fitter has little contact with the Authority Having Jurisdiction. The fitter is not required to carry insurance. The fitter is not subject to recall for warranty repair, and the fitter does not maintain record drawings of installed systems. Rather, it is the **contractor** who is called to fulfill these duties and responsibilities.

## **Training and Experience**

By necessity, the experience and training of workers involved in the installation of a sprinkler system will vary widely. At a typical job, the workers involved will range from newly hired employees performing support tasks to experienced fitters with many years of experience. The job performed will be matched to the level of experience of the worker. For many support tasks, only limited training or experience is required, and only minimal supervision is required.

## **Quality Control vs. Labor Restrictions**

When fitter licensing is proposed by local or state officials, it is usually with the well-intentioned goal of insuring “quality workmanship.” But a critical question must be “who determines the quality of the workmanship?” Who is ultimately held responsible for the quality of a fire sprinkler installation? Does the customer or AHJ hold the licensed fitter responsible for poor workmanship? Or is it the contractor who is held responsible? The answer, of course, is that the contractor is ultimately held responsible for the quality of work.

The licensed fitter does not contract the work, determine the applicable codes or standards, design the system, or select the fire protection devices. Those functions are the responsibility of the fire sprinkler contractor. The AHJ holds the contractor responsible for quality—and the contractor holds the employee responsible for quality.

Because only the sprinkler contractor can hold the sprinkler fitter responsible for the quality of work, state or local requirements for licensing sprinkler fitters have no real meaning in insuring quality. Licensing of fitters **cannot** and **does not** insure quality of installations.

Unfortunately, fitter licensing requirements are often promoted by organized labor to restrict and control access into the trade, and to provide ready access to the names of licensed fitters (through public records or freedom of information act requests) to be used in labor organizing attempts. When organized labor attempts to promote licensing of fitters, the true reason may be masked by claims that such licensing will insure quality.

## **Manpower Problems Resulting from Fitter Licensure**

A requirement that one or more licensed fitters be present at all times at the job site results in the inefficient allocation and use of manpower and creates scheduling difficulties that result in job delays.

Requiring licensed fitters to be present at the job site can result in ridiculous interpretations that have a devastating impact on providing manpower at the job. At least one state agency has ruled that only licensed fitters can relocate pipe once it is unloaded at the job site. This precludes the use of helpers or less experienced sprinkler fitters to perform job duties that are not related to the actual installation of sprinklers. This requirement denies the contractor the right to allocate the use of employees to work equal to the experience or training of the employee. Such actions require highly trained and experienced employees to do more menial work thereby reducing their availability for other jobs.

Some states require that licensed fitters be present at the job site whenever work is being performed, regardless of the nature of the work being performed. This restricts the hours that the work can be performed and means that a licensed fitter must be present when preparatory work is being performed that is not involved with the actual installation of sprinklers or sprinkler piping.

Most states that require sprinkler fitter licensing have already seen the adverse effects of such requirements. Because contractors cannot meet the manpower requirements due to fitter licensing regulations, deadlines cannot be met and new jobs are not bid or are seriously delayed due to a manpower shortage. Restrictive licensing requirements in fact drive up the cost of jobs to the consumer

## **Who Should Be Licensed**

Automatic fire sprinklers save lives and property. If a plumbing system fails, water damage will result. If air conditioning or heating fails, occupants will be uncomfortable. If a fire sprinkler system fails due to poor workmanship, lives may be lost and property damage will occur. Clearly, the AHJ and the building owner should be concerned about the quality of workmanship in any fire sprinkler system.

But does the importance of automatic fire sprinkler systems create a necessity for the licensing of sprinkler fitters? No. We believe the information provided herein proves conclusively that fitter licensing is not only not required, but can actually hinder the efficient installation of automatic fire sprinkler systems.

It is not sprinkler fitters that need to be licensed—it is the **fire sprinkler contractor** who is ultimately responsible for the quality of the installation. It is the **fire sprinkler contractor** who should be licensed to install fire sprinkler systems, and licensing of contractors must be based upon **competency** in order to be effective.