

## ACRP 09-22: QUALIFIED WORKER

It is often asked, “who is qualified to work on airfield lighting?” The answer to that question may not be as clear as might be expected. A worker might be qualified for one task, but not for another. Also, someone with a professional electrical certification may not be “qualified” for some electrical tasks on the airfield. Some tasks, such as working on live electrical circuits, may require a great deal of training, while other task such as replacing a light bulb on a de-energized circuit will require far less training to be qualified.

### *So, who is “qualified”?*

The FAA Advisory Circular 150/5340-26C describes a qualified worker in Section 2.2 through a reference to a definition from NFPA-70E which states that “*a qualified person shall be trained and knowledgeable in the construction and operation of equipment or a specific work method and be trained to identify and avoid the electrical hazards that might be present with respect to that equipment or work method.*” ([NFPA 70-E10 110.2 \(A\)\(1\)](#)) ([FAA AC 150/5340-26C \(2.2\)](#)).

Appropriate training for the task is the key element. The qualified worker must be trained to recognize and avoid the electrical hazards involved in the airfield lighting task at hand. That is why a Journeyman Electrician who has not been trained in constant current airfield lighting may not be a “qualified worker.” For a brief guide to worker selection and skill training for various levels of airfield electrical tasks, see the [Task Decision Matrix](#) included on this page.

### *Who decides which workers are “qualified”?*

There may be state or local rules that apply to qualifications, but ultimately it is the responsibility of the airport to make the decision of who is qualified. Qualified workers must successfully complete specific training in the areas of their involvement which has been documented by the airport or other recognized training organizations. If the airport does not feel competent to certify a worker as qualified, then it is recommended that it find a recognized training organization to qualify its electrical staff. Examples of relevant literature scoping qualified workers is included in the following pages of this document.

### **WARNING:**

If an employee is sent out to do an airfield lighting task by the airport, they will be considered de-facto qualified by the airport. If that employee is injured, the questions may be asked: “was the worker qualified?”, “how was the worker qualified?”, and “who qualified the worker?”. The airport should make sure appropriate training has been given to help ensure worker safety and reduce their liability that results from any worker injury or air carrier incident that may have been prevented by appropriate airfield maintenance worker training.

## **SAMPLE QUALIFIED WORKER DEFINITIONS: FAA AC 150/5340-26C**

### 2.2 Safety Requirements.

Only a qualified person, per the definition in NFPA 70E, performs maintenance work. The qualified person must possess the requisite technical skills and be trained to recognize and avoid electrical hazards. The qualified person must also be trained in the proper procedures for operations in an aircraft operation area (AOA). A person may be considered qualified for certain tasks and not qualified for others.

#### 2.2.1 Qualified Person.

A qualified person must, at a minimum, be additionally trained to:

- Distinguish exposed live parts from other parts.
- Determine nominal voltage of exposed parts.
- Determine the approach distances in NFPA 70E; Table 130.2(C).
- Possess the decision-making skills necessary to determine the degree and extent of hazard, PPE required and planning to safely perform the job.

## **SAMPLE QUALIFIED WORKER DEFINITIONS: NFPA-70E**

110.2(A)(1) Qualified Person. A qualified person shall be trained and knowledgeable in the construction and operation of equipment or a specific work method and be trained to identify and avoid the electrical hazards that might be present with respect to that equipment or work method.

(a) Such persons shall also be familiar with the proper use of the special precautionary techniques, applicable electrical policies and procedures, PPE, insulating and shielding materials, and insulated tools and test equipment.

(b) A person can be considered qualified with respect to certain equipment and tasks but still be unqualified for others.

(c) Such persons permitted to work within the limited approach boundary shall, at a minimum, be additionally trained in all of the following:

(1) Skills and techniques necessary to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment

(2) Skills and techniques necessary to determine the nominal voltage of exposed energized electrical conductors and circuit parts

(3) Approach distances specified in Table 130.4(D)(a) and Table 130.4(D)(b) and the corresponding voltages to which the qualified person will be exposed.

(4) Decision-making process necessary to be able to do the following:

a. Perform the job safety planning

b. Identify electrical hazards

c. Assess the associated risk

d. Select the appropriate risk control methods from the hierarchy of controls identified in 110.1(G), including personal protective equipment

(d) An employee who is undergoing on-the-job training for the purpose of obtaining the skills and knowledge necessary to be considered a qualified person, and who in the course of such training demonstrates an ability to perform specific duties safely at his or her level of training, and who is under the direct supervision of a qualified person shall be considered to be a qualified person for the performance of those specific duties.

(e) Employees shall be trained to select an appropriate test instrument and shall demonstrate how to use a device to verify the absence of voltage, including interpreting indications provided by the device. The training shall include information that enables the employee to understand all limitations of each test instrument that might be used.

(f) The employer shall determine through regular supervision or through inspections conducted on at least an annual basis that each employee is complying with the safety-related work practices required by this standard.

## **SAMPLE QUALIFIED WORKER DEFINITIONS: AAAE ACE Certification Manual**

### **1.8 Requirement for Safety in the Work Place**

This section is critical to the AAAE ACE certification training due to the introduction by FAA in AC 150/5340-26C the recommendations to improve safety in the workplace. This is part of an effort by numerous standards organizations to put increased emphasis on improving worker safety. There are provided in the above AC reference specific training requirements for workers that service the airport series circuit and associated electrical equipment. Workers are required to successfully complete specific training in the areas of their involvement which has been documented by the airport or other recognized training organization. This course is intended to be an integral part in the worker training process. As an airport maintenance worker you should request certifiable training that will through the knowledge imparted help keep you safe and satisfy the training requirement. The airport should make sure appropriate training has been given to help insure worker safety and reduce their liability that results from any worker injury or air carrier incident that may have been prevented by appropriate airfield maintenance worker training.

## ACRP Project 09-22

<https://crp.trb.org/acrpwebresource20/>

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