

# 10 Steps That Must be Completed to Comply with the New 2018 NFPA 70E ‘Job Safety Plan’

As currently proposed in the new edition of the 2018 NFPA 70E Standard, Sec. 110.1 (I)(1)

Before starting an electrical job that involves working on or with electrical equipment, a “Qualified Electrical Worker” must complete a written Job Safety Plan. Once the plan is completed, the “Qualified Electrical Worker” is required to complete a Pre-Job Safety Briefing with the employees that are involved in that job. The following steps are required to meet the new “Job Safety Plan” under the new proposed standard.

- (1)** The Job Safety Plan and Pre-Job Safety Briefing must be documented (written down)
- (2)** A description of the job (everything that needs to be completed)
- (3)** A description of each individual task (what the task involves)
- (4)** Identification of the electrical hazards associated with each task (electrical hazards only)
- (5)** A Shock Risk Assessment

Estimate the likelihood of the occurrence and severity of shock to determine if any additional protective measures are required. To estimate the likelihood of getting shocked while performing a job, a risk assessment matrix can be used which focuses on three main variables that determine an acceptable risk level you are willing to take.

**Likelihood of a worker to get shocked:**

- Frequent: Most likely to get shocked
- Probable: Very Likely to get shocked
- Occasional: Likely to get shocked
- Remote: Not likely to get shocked
- Improbable: May assume that shock will not happen

**Severity/Consequences of being shocked:**

- Negligible: First aid or minor medical treatment only
- Marginal: Minor injury, (could be an OSHA lost workday incident)
- Critical: Disability for more than 3 months
- Catastrophic: Death or permanent disability

**Risk Level**

- Low: Risk level is acceptable (below 50 volts)
- Medium: Utilize the appropriate “Hierarchy of Risk Control Methods” *on page 4*
- Serious: High priority action - utilize the “Hierarchy of Risk Control Methods” at the top level
- High: Operation not permissible - must de-energize (High voltage)

**(6) An Arc Flash Risk Assessment**

Estimate the likelihood of the occurrence of arc flash and the severity, to determine if any additional protective measures are required. To estimate the likelihood of an arc flash occurring while performing a job, a risk assessment matrix that is similar to the one used for a shock risk assessment. Below is the risk assessment matrix for an arc flash:

**Likelihood of an arc flash to occur:**

- Frequent: Most likely for an arc flash to occur
- Probable: Very likely for an arc flash to occur
- Occasional: Likely to have an arc flash
- Remote: Not likely to have an arc flash
- Improbable: May assume that an arc flash will not happen (below 1.2 cal/cm<sup>2</sup>)

**Severity/consequences of being shocked:**

- Negligible: First aid or minor medical treatment only (below 1.2 cal/cm<sup>2</sup>)
- Marginal: Minor injury/burns, (could be an OSHA lost workday incident)
- Critical: Severe burns and disability (more than 3 months)
- Catastrophic: Death or permanent disability (high cal/cm<sup>2</sup> level above 40)

**Risk Level:**

- Low: Risk level is acceptable (below 50 volts)
- Medium: Utilize the appropriate “Hierarchy of Risk Control Methods” *on page 4*
- Serious: High priority action - utilize the “Hierarchy of Risk Control Methods” at the top level
- High: Operation not permissible, must de-energize (high voltage)

**(7)** Specific safe work procedures involved with each task (putting on appropriate PPE, using insulated tools, verifying the absence of voltage with a voltage meter, etc.)

**(8)** Go over any special precautions that may be necessary (using a second person as a spotter, having a rescue hook available, etc.)

**(9)** If any energy source controls are necessary, equipment may need to be locked out and tagged

**(10)** Give a pre-job briefing before work begins with employees involved (this is a verbal meeting with all workers involved to go over the “job safety plan”)

***Lewellyn Technology Tip: After the “Job Safety Plan” has been completed and explained, require workers who are involved in the job to sign their name to acknowledge that they understand the plan and will comply with all the safety requirements.***

A “Qualified Person” should follow the “Hierarchy of Risk Control Methods” as part of the risk assessment procedure to determine which control methods can be used to help reduce the hazard. The hierarchy pyramid is set up with the safest control methods at the top. The list of controls can be found in Section 110.1(G) in the NFPA 70E Standard.

## Hierarchy of Risk Control Methods

### **Elimination**

This step focuses on eliminating the hazard to create an electrically safe work condition.

### **Substitution**

Workers can opt to substitute less hazardous equipment, such as non-electrical or battery operated tools.

### **Engineering Controls**

These options can automatically reduce risks, such as ground fault circuit interrupter (GFCI) protection and installed barriers.

### **Awareness**

This step requires that people be alerted to the hazard which can include installing permanent or temporary signs, labels, and barricades.

### **Administrative Controls**

This method involves planning processes, training, permits, job planning, and work procedures intended to create safer work conditions.

### **Personal Protective Equipment (PPE)**

This needs to be available when needed. The last resort method is PPE, which includes insulated tools, clothing, and gloves, and is intended.

## How can Lewellyn Technology help with your Job Safety Plan and NFPA 70E requirements?

The 2018 NFPA 70E puts the responsibility on the “Qualified Person” to complete and explain the “Job Safety Plan” to all workers involved. A qualified person must be trained to not only understand what a job safety plan is, but also to be able to complete each step of the plan. Lewellyn Technology provides electrical safety training that covers the new NFPA 70E updates which will prepare your qualified person to stay in compliance and be able to do their job safely and correctly. If you need training for your qualified electrical workers, check out our catalog to learn about our electrical safety training courses.

[Download Training Catalog](#)

### Why Partner with Lewellyn Technology?

Lewellyn Technology has been improving workplace safety since 1993. Our core business is eliminating electrical and combustible dust hazards in facilities of different industries nationwide. Our team of industry leaders and recognized OSHA experts work to ensure the compliance aspect is part of our solution, keeping safety of your employees as a priority. Lewellyn Technology provides multi-year project support and long-term partnerships; that is why we are there for you after the delivery to ensure excellent service and results.

We have in-house technicians nationwide which makes it easier for our clients to know who they are dealing with. Part of what makes us different from other companies is that we do not subcontract the projects so you will continue to receive consistent quality and deliverables from coast to coast.

#### About the Author



David Weszely is the Safety and Training Manager at Lewellyn Technology and has been with the company for 5 years. He provides vision, leadership, safety training, and technical expertise in areas of workplace safety including electrical safety program development. He also advises management on loss control and risk reduction strategies.

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