

Instructions for CCPE.FASI

Fire Alarm System Installation Performance Evaluation

General Testing Instructions:

In this performance evaluation, you are to complete the installation and wiring of components, which are part of a project, based on a set of drawings, and specifications that will be given to you in a few minutes. For this evaluation, some of the physical infrastructure (boxes, raceways) that you will use will be pre-installed. In addition, some of the required fire alarm components will be preinstalled. You will, however, be required to install several fire alarm initiating, indicating, and auxiliary devices, including a water flow sensor and a door magnet circuit. This installation requires that you properly connect all devices to the FACP (Fire Alarm Control Panel) or power source when necessary. NAC, IDC, and SLC devices including smoke detectors, strobe-annunciators, chimes, duct smoke detectors, manual pull stations, door magnets, and a sprinkler system standpipe water flow detector are included in the evaluation. These devices may be different types, and each device will be wired as either a Class A or Class B device. Devices will be either Conventional or Addressable (Digital) configuration. In addition to the devices, you must identify and properly/neatly install all cabling or wiring for all devices, the water flow-sensor, and the door magnet using the industry recognized cable for each type of connection.

As you complete the tasks, here are a few points to keep in mind:

- In addition to drawings and specifications, you will be supplied a copy of the current *NEC*[®] (or *CEC*[®]) and any other code if necessary for your Evaluation; as well as any other documentation which might be necessary to use in completion of the required tasks. All tasks are to be completed per the *NEC* (or *CEC*) and any other applicable codes.
- You must complete all tasks using only the tools and materials made available to you by the evaluation administrator. You may use your own pocket tools if you have them with you. PPE equipment is available, and you may use it if it is appropriate. You must observe and comply with all posted safety rules.
- The Evaluator will announce how much time you have to complete the required tasks before you begin. You should attempt to complete all the tasks in the time allotted.
- Your final evaluation is based on whether or not each task which you complete during the evaluation 1.) Results in a functionally operable outcome; 2.) Complies with the *NEC* (or *CEC*) and any local codes, and 3.) Is completed in a workmanlike manner, where workmanlike includes both physical and electrical layout and neatness.
- There will not be any breaks after you have begun your Evaluation. Please come to the Evaluation in proper attire like you would wear on an actual job and prepared to spend the allotted time at your Evaluation Station working on your Evaluation.
- Candidates completing Evaluations are not allowed to use cell phones, pagers or other electronic communications devices during an Evaluation. All such devices are to be turned off prior to the Evaluation, and the Evaluator may require you to leave them in a designated location before your Evaluation can begin.

THE PROCEDURE TO BE FOLLOWED FOR THIS EVALUATION IS AS FOLLOWS:

1. The evaluation administrator will advise you when to begin. You cannot open the blueprints or specifications until instructed to do so. Be sure to review information about your evaluation which can be found in a table on the outside of your envelope.

2. When instructed, you can review the two documents in your evaluation envelope (Drawings and Specifications), and any additional evaluation information on your evaluation envelope before beginning your evaluation. You may write on these papers, making notes as appropriate to help you complete your installation.

UNDER NO CIRCUMSTANCES WILL YOU BE ALLOWED TO LEAVE THE EVALUATION AREA WITH ANY OF THESE MATERIALS INCLUDING THE BLUEPRINTS OR THE SPECIFICATIONS.

3. While you are reviewing the documentation, the evaluator will show you the work area, tools and materials that you can use. You will then be instructed to begin, and you will have a specified amount of time to complete as much of the evaluation as you are able.
4. The Evaluator will inform you when your time is up. At that time you must stop work on the project.
5. The Evaluator will score your work, and you will receive a detailed report showing your score. In the event that your score is unsatisfactory, the Evaluator will share a report identifying any areas where you need additional study.

SPECIFIC INFORMATION ABOUT THIS EVALUATION

In this evaluation, you will be required to install components for a fire alarm system. Your installation will include initiating devices, indication devices, and auxiliary equipment. In addition to physically installing the components, you will be required to provide the proper wiring (proper cable type and size) between each device and the FACP or power source for that device. If any of the components require an EOL (end-of-line) device, or if your FACP includes unused Class B circuit connections, you will be required to install all EOL devices where necessary for the proper operation of the fire alarm system.

The following notes apply to this evaluation:

1. The FACP is pre-installed and provides the connection point for each circuit.
2. All junction boxes and raceways are pre-installed, are identified, and are to be used as allowed by appropriate Sections of the *NEC* (or *CEC*).
3. The power source for the door magnet, the duct smoke detector, the sprinkler water pipe and water flow sensor are all pre-installed.
4. Initiating devices* (smoke detector, duct smoke detector, manual pull station, and monitor module) and indication devices* (strobe/horn, chime, and door magnet relay) can be of any configuration (Class A or Class B, and Conventional or Addressable) and must be wired and configured to meet the requirements which apply to each type of circuit.

*NOTE: Component configuration is dependent of the type of FACP, the characteristics of each component, and the design of the system. It is your responsibility to install each component correctly.

5. Remember your final score is based on three criteria:
 - a. Is the circuit/system is functionally operable.
 - b. Is each circuit/system is installed in accordance with the *NEC* (or *CEC*).
 - c. Is all work for each system and or circuit is installed in a neat and workmanlike manner