



## **Electrical Construction Wiring**

### **2022 SkillsUSA Michigan State Championships Contest Description Task and Materials List**

#### **CONTEST LOCATION:**

DeVos Place  
303 Monroe Ave NW  
Grand Rapids, MI 49503  
616.742.6500  
<http://devosplace.org/>

#### **RESUME:**

Each student must submit a one-page printed resume before the contest start at the contest site (present to contest coordinator, not judges). The resume is no longer submitted online. This is the only time that resumes can be turned in. Failure to do so will result in a 10 point penalty.

#### **TASKS TO BE PERFORMED:**

- Answer questions to written test regarding SkillsUSA knowledge.
- Install the electrical materials as per the supplied drawings

#### **SCOPE OF PROJECT:**

- Take written test- 30 minutes, go over answers.
- Install a doorbell system as per the drawing.
- Mount electrical equipment as shown on the drawing.
- Install Non-Metallic Sheath Cable and wire circuits containing 3-way and 4-way switching for the luminaire.
- Install Non-Metallic Sheath Cable and wire circuits for the receptacles and the single pole switch as per the notes on the drawing.
- Install the MC cable as shown on the drawing.
- Bend and mount conduit as per the drawing.

#### **STUDENTS MUST SUPPLY:**

- Resume - 1 page
- Calculator
- Hammer
- Screwdrivers (Regular and Phillips)

- Needle nose pliers
- Wire strippers
- Non-Metallic Sheath Cable strippers
- Crimp tool for splice caps
- Diagonal wire cutters
- Electrical side cutting pliers
- Tool pouch and belt
- 6' rule or tape measure
- **Approved Safety hard hat**
- **Safety glasses with side shields or goggles**
- ½" EMT conduit hand bender (thin wall)
- Torpedo level
- MC cutter
- Hack saw frame & blade
- #2 pencil
- Voltage tester
- Continuity tester
- Cordless drill/screwdriver
- Conduit reamer
- National Electrical Codebook 2011 (**no hand books**)
- Knife
- Key hole saw
- Materials must be supplied by the contestant (list to follow)

NOTE:

- Conduit box kickers are NOT allowed.
- Judges reserve the right to deny use of any tools not on this list.
- Do not borrow tools from others.
- Each student will be scored on a **clean and safe work space**.

DRESS CODE:

- Leather work boots or shoes (no athletic shoes)
- Appropriate work attire.

Revised 2/23/22

# Electrical Construction Wiring Skills USA Contest

Materials List to be provided by each contestant

1 – 4 x 2 1/8" square box with 1/2" k.o. with side mount bracket

1 – 4" square plaster or mud ring, single device with 1/2" rise

3 – 4 x 2 1/8" square box with 1/2" k.o.

3 – 2-gang plastic nail-on box

3 – single-gang plastic nail-on box

2 – round plastic nail-on box

2 – 15a/ 125v single pole switch

2 – 15a/ 125v three-way switch

2 – 15a/ 125v four-way switch

2 - 2 – 15a/ 125v duplex outlet (TR)

2 – 15a/ 125v gfci outlet (TR)

2- Plastic keyless light fixtures

4 – 1/2" Romex Connectors

2 – 5' 1/2' EMT

6 – 1/2" EMT set screw connectors

6 – 1/2" EMT one hole straps

2 – MC Cable connectors with anti-short bushing

Sheet-metal screws to install boxes and straps

Green ground screws

Romex staples

Assorted wire-nuts (Yellow/ Red/ Grey/ Blue) Ideal or 3M or equivalent.

1 – Chime Kit that includes

1. transformer that can be installed in service pane
2. 2 – pushbuttons
3. Mounting hardware/ screws

15 ft. of 18/2 bell wire with Staples for 18/2 bell wire, Wire-nuts for 18/2 bell wire