HAZARD IDENTIFICATION

☐ The company has a written Injury and Illness Prevention Program (IIPP) that meets all Cal/OSHA requirements. It includes identification of electrical hazards on the site, regular inspections, accident investigation, and correction of hazardous conditions. [1509]

GENERAL

☐ Only qualified persons work on electrical equipment. [2320.1(a) and 2714(a)]

☐ All electrical equipment and systems are de-energized and either locked out or tagged out before anyone works on them. All affected workers are notified. [2320.4 and 2320.6]

TEMPORARY WIRING

☐ Temporary wiring is not used for more than one year on a construction site unless special state permission is obtained. [2799(a)]

☐ Temporary wiring is removed immediately when construction is complete or when the time limit expires. [2799(b)]

☐ Conductors and equipment are protected from overcurrent by circuit breakers, fuses, etc., and can safely carry the load. [2390.1, 2716, and 2821]

☐ Temporary wood poles used for wiring are a minimum of 6 inches square, or have a top diameter of at least 5 inches if round. They are at least 20 feet long and embedded at least 4 feet in the ground. [2405.3]
### LOCATION AND MAINTENANCE

- Electrical equipment and wiring are in safe condition. [2340.1]
- Electrical equipment and wiring are protected from physical damage and environmental deterioration. [2340.11, 2405.2(f), and 2712]
- Electrical equipment and wiring exposed to physical damage are properly enclosed or guarded. [2340.26 and 2713]
- Electrical equipment and wiring are firmly secured. [2340.13 and 2710]
- Energized or live parts of electrical equipment operating at 50 volts or more are protected by approved enclosures. [2340.17(a) and 2717]
- Electrical cabinets and other enclosures have appropriate warning signs. [2811]
- Suitable access is provided to energized switches, circuit breakers, fuses, relays, and similar controls if workers must use, examine, adjust, service, or maintain them. [2340.16(a), 2340.27, 2711, and 2940]
  The workspace provided around the equipment meets required minimum dimensions. [Table 2340.16(b)]
- Wiring is kept 16 feet above vehicle routes, and 12 feet above pedestrian routes. Required clearance distances are also maintained for wiring above structures and work areas. [2375.18, 2934, and 2946]
- All electrical control devices clearly indicate which equipment they control, and whether they are on or off. [2715]

### GROUNDING

- Grounding is assured through either a ground fault circuit interrupter (GFI) system or an assured equipment grounding conductor program. [2405.4(b)]
- If there is a GFI system, approved GFI devices are present on all 120-volt, AC, single-phase, 15- and 20-ampere outlets which are not part of permanent building wiring. [2405.4(c)]
- If there is a grounding conductor program, the program is in writing and covers all 120-volt, AC, single-phase cord sets, plugs, and receptacles which are not part of permanent building wiring. The program also includes daily visual inspection, regular testing, ID markings placed on the equipment, and recordkeeping. [2405.4(d)]
- Earth returns are not used for grounding. [2405.2(c)]
- Bonding is provided where necessary to assure electrical continuity and safe electrical conduction. [2395.70]
- Every receptacle is grounded. [2510.7(a)]
CONDUCTORS AND CORDS

☐ Insulated single conductors are approved types for the purpose, suitably supported, and not subject to mechanical injury. [2405.2(a)]

☐ No bare conductors are used for temporary wiring. [2405.2(a)]

☐ Multi-conductor cords and cables are hard service type or equivalent, with multi-conductor fittings. [2405.2(b)]

☐ Flexible cords are used only for electrical connections to (a) elevators; (b) cranes and hoists; (c) lamps, appliances, and equipment which are portable, which must be interchanged frequently, or which must be removed frequently for maintenance and repair. [2500.7(a) and 2522.8(c)]

☐ Flexible cords are not used as a substitute for fixed wiring. [2500.8(a)]

☐ Flexible cords are not run through holes in walls, ceilings, or floors, or through doors or windows. They are not attached to building surfaces or concealed behind walls, ceilings, or floors. [2500.8(a)]

☐ Flexible cords are equipped with an attachment plug, and are energized from an approved receptacle. [2500.7(b)]

☐ Flexible cords are used only in continuous lengths without splices (except for repairs by a qualified electrician on No. 12 cord or larger, if the splice retains insulation). [2500.9(a)]

☐ Flexible cords are connected so that strain relief is provided to prevent pull from being directly transmitted to joints or terminal screws. [2500.10(a)]

☐ Flexible cords are not placed near water, liquids, or metal capable of transmitting current.

☐ 15- and 20-amp attachment plugs have no exposed current-carrying metal parts except prongs, blades, or pins. [2510.56(a)]

☐ Skirted attachment plugs are used on all equipment operating at more than 300 volts. [2510.7(b)]

☐ Receptacles, cord connectors, and attachment plugs are constructed to be non-interchangeable: a receptacle will not accept a plug with a different voltage or current rating. [2510.56(b)]

LAMPS

☐ Lamps are located at least 7 feet vertically or 3 feet horizontally from the work area, unless there are guards. [2405.2(d)]

☐ Open wire taps from permanent wiring outlet boxes to lampholders are not more than 6 inches long. [2405.2(e)]
Portable hand lamps using flexible cords have a handle made of molded composition or other approved material and a guard. [2510.6]

**ELECTRICAL TOOLS**

- All electrical tools are grounded or double insulated. [2395.45]
- All exposed metal parts of electrical power tools are grounded if they are likely to become energized. [2395.45(a)]
- All electrical power tools have appropriate switches and controls. [3557]

**PORTABLE GENERATORS**

- The frame of a portable or vehicle-mounted low voltage generator is grounded unless the generator is single-phase, rated not more than 5 KW, and the circuit conductors of the generator are insulated. [2395.6]

**HIGH VOLTAGE TEMPORARY POWER—SPECIAL REQUIREMENTS**

- Temporary wiring that carries high voltage (over 600 volts) is guarded by fencing, barriers, or other means to keep out unauthorized personnel. [2798]
- Workspace around high voltage equipment is not used as a passageway when energized parts are exposed. [2936]
- There is adequate illumination in high voltage areas, and those working on the equipment are not endangered by live parts. [2933]

**PERSONAL PROTECTIVE EQUIPMENT AND FIRST AID**

- Workers exposed to possible electric shock are provided and use suitable protective equipment or devices, such as insulated rubber gloves. [1518]
- Workers exposed to possible electric shock or burns are provided and use approved head protection. For under 600 volts, head protection meets the requirements for Class A or B in American National Standards Institute (ANSI) standard Z 89.1 1986, *Requirements for Protective Headwear for Industrial Workers*. For over 600 volts, stricter requirements apply. [3381(b) and (d)]
- First aid equipment is available. There are personnel trained in first aid on-site. The site also has an effective communication system for contacting help. [1512(b), (c), and (e)]