

Electrical Utility & Lineworker Safety

Guy's Construction
123 Main Street, Anytown, CA 90210

29 CFR 1926.950-960 (Subpart V) / 29 CFR 1910.269

Effective Date: June 08, 2026

SAMPLE DOCUMENT - NOT FOR COMPLIANCE USE

JURISDICTION AND REGULATORY FRAMEWORK

Electrical utility and lineworker safety is governed by:

- 29 CFR 1926.950-960 (Subpart V): Power Transmission and Distribution (construction)
- 29 CFR 1910.269: Electric Power Generation, Transmission, and Distribution (general industry/maintenance)
- NESC (National Electrical Safety Code): design/installation standards for utility infrastructure
- NFPA 70E: Standard for Electrical Safety in the Workplace (arc flash)

STATE-SPECIFIC: California has additional requirements:

- lineworker safety compliance
- telecom-tower
- VOSHA standards: unique lineworker safety standard (electrical utility workers)
- Vermont VOSHA - Unique Lineworker Standard
- Vermont
- must be repeated at intervals of not greater than one year
- to warn persons that the conveyor will be started when the entire length of the conveyor is not visible from the starting switch
- with reasonable promptness after the inspection is completed
- by certified mail to the employer or delivered to him or her personally
- weekly by a person qualified under § 75.1915
- electrocution or arc flash
- physical or electrical contact with the electric power circuit
- electrical shock or electrocution
- shall not be of the instantaneous type and shall not be opened automatically by a fire alarm system
- increased risk of arc flash or electrocution
- electrical shock or electrocution
- extraneous materials
- the facility whose fire suppression system did not meet the installation or maintenance requirements, the defect found, and the corrective a
- the requirements of this subchapter when transported in accordance with applicable state, local, or tribal requirements
- practical operational test demonstrating reading and applying load, boom angle, and other indicator devices
- 36.1-46.0kV 2ft 10in
- 46.1-72.5kV 3ft 4in
- 1.1-15.0kV 2ft 1in
- 15.1-36.0kV 2ft 7in
- 0.05-1.0kV avoid contact
- The processing, fabrication or refining of special nuclear material or the separation of special nuclear material, or the separation of spec
- Department of Labor, Employment Standards Administration, Wage and Hour Division
- assisting or participating in, or is about to assist or participate in, these activities

- upon considering and balancing specified environmental and public interest factors
- there is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest
- allow for line maintenance, periodic line cleaning, and integrity testing
- locations where dangerous concentrations of suspended dust would not be likely, but where dust accumulations might form on or in the vicinity
- respirable crystalline silica when cutting materials containing crystalline silica without water suppression
- uncontrolled exposure to respirable crystalline silica above the PEL
- developing lung cancer
- treat the employee as if exposed to lead in excess of 2,500 µg/m³ (50xPEL) until exposure assessment documents otherwise
- medical surveillance
- employee exposure to respirable crystalline silica
- transportation by aircraft
- determined safe for its intended use by its manufacturer on the basis of test data which the employer keeps and makes available for inspection
- contact with energized power lines
- T8 CCR 1598: minimum clearance from energized overhead lines based on voltage (more detailed than federal)
- T8 CCR 1598: minimum clearance from energized overhead power lines for construction equipment
- When the soil moisture content is at a level such that the soil cannot readily take the addition of drilling fluids
- to the ground when not in use
- the appropriate Conservation Division District Office at least two (2) business days prior to commencing pit operations
- None
- packaging specification and performance requirements of part 178 at the Packing Group III performance level
- increased risk of being struck by vehicular traffic
- California Manual, apparel manufacturer, ANSI/ISEA 107-2004 Appendix B, or ATSSA

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Monday Safety — Sample Document

1.0 PURPOSE AND SCOPE

This program covers electrical utility construction, maintenance, and line clearance operations on Guy's Construction projects.

29 CFR 1926.950(a)(2)

Electrocution is a leading cause of death in construction (Fatal Four). Electrical utility work involves voltages that kill instantly. Strict compliance with this program is mandatory.

2.0 MINIMUM APPROACH DISTANCES (MAD)

- minimum approach distances established by the employer under § 1926.960(c)(1)(i)

29 CFR 1926.1410(c)(2)

- employee who is insulated from the energized part

29 CFR 1926.960(c)(1)(A)

- the ergonomic component to the electrical component of the minimum approach distance to obtain the total safe minimum approach distance

Not specified

- a minimum approach distance

29 CFR 1910.269(l)(3)(iii)

Table A: Minimum Approach Distances (AC)

Voltage (kV)	Phase-to-Ground (ft)	Phase-to-Phase (ft)	Notes
0.05-1.0	Avoid contact	Avoid contact	Rubber gloves may be used
1.1-15.0	2 ft 1 in	2 ft 2 in	Distribution voltages
15.1-36.0	2 ft 4 in	2 ft 7 in	Sub-transmission
36.1-46.0	2 ft 7 in	2 ft 10 in	
46.1-72.5	3 ft 0 in	3 ft 4 in	Transmission
72.6-121.0	3 ft 2 in	3 ft 7 in	
138.0	3 ft 4 in	3 ft 10 in	Common transmission voltage
230.0	4 ft 9 in	6 ft 4 in	High-voltage transmission
345.0	7 ft 1 in	9 ft 10 in	Extra high voltage
500.0	11 ft 3 in	14 ft 11 in	
765.0	14 ft 11 in	18 ft 1 in	Ultra high voltage

29 CFR 1926.960 Table V-2 (selected values, consult full table for exact distances)

3.0 DE-ENERGIZING AND GROUNDING

- 29 CFR 1926.950-968 covers CONSTRUCTION of power T&D lines/equipment (new build, upgrades); mirrors 1910.269 requirements but with construction-specific provisions; includes crane operations near energized

29 CFR 1926 Subpart V

- de-energized line runs parallel to energized circuit; electromagnetic coupling induces potentially lethal voltage; protective grounds required to drain induced current

29 CFR 1910.269(n) / Appendix C

- establishing electrically safe work condition (de-energize) before any electrical work; energized work only with written permit

NFPA 70E Article 120

- energized electrical work above 40 cal/cm² incident energy; must de-energize

NFPA 70E Article 130.5

- specific switching and tagging procedures for T&D lines: request to de-energize, open disconnect, tag, test for absence of voltage, ground before work

29 CFR 1910.269(m)

- Request de-energize from utility/owner. Verify de-energized by testing.
- Apply visible grounds on all phases before work begins
- Ground placement: as close to the work location as practicable
- Test before touch: treat all conductors as energized until tested and grounded

4.0 LIVE-LINE WORK

Live-line work requires specific training, tools, and procedures. Only qualified employees may perform live-line work.

- Rubber insulating equipment: gloves, sleeves, blankets, line hose - tested per ASTM D120
- Live-line tools: hot sticks, shotgun sticks - tested per ASTM F711
- Two qualified workers minimum for live-line work
- Energized work permit required (Appendix A)

5.0 OVERHEAD LINE SAFETY FOR CONSTRUCTION

- the utility owner/operator confirms that the power line has been and continues to be deenergized and visibly grounded at the worksite

29 CFR 1926.1409(f)

- all power lines are energized

29 CFR 1926.1409(f)

- tension-stringing method, barriers, or other equivalent measures to minimize the possibility that conductors and cables will contact energized power lines or equipment when installing or removing line

29 CFR 1926.964(b)(1)

- prior electrical contact with a power line
- Identify all overhead lines before work begins (pre-construction survey)
- Maintain minimum clearances per Table A (1926.1408 for cranes)
- Request de-energizing or insulating from utility when work must occur within MAD

6.0 UNDERGROUND ELECTRICAL WORK

- Locate and mark underground utilities before excavation (811)
- Hand-dig within tolerance zone of marked utilities
- Identify cable type and voltage before work (utility coordination)
- Test for de-energized status. Ground before cutting or splicing.
- Manhole entry: confined space procedures plus electrical hazard controls

7.0 FALL PROTECTION FOR LINE WORK

- 100% tie-off when climbing or working on poles, towers, and structures above 4 feet
- Fall arrest equipment rated for electrical work (non-conductive or tested for voltage)
- Climbing equipment (gaffs, body belt, positioning strap) inspected before each use
- Bucket trucks: fall restraint in the bucket at all times when elevated

8.0 VEHICLE AND EQUIPMENT CLEARANCES

- Equipment operating near energized lines: maintain Table A clearances
- Crane: 1926.1408 Table A clearances (20 ft for up to 350 kV)
- If contact occurs: stay in the vehicle, warn others away, call utility, jump clear only as last resort (bunny hop)
- Grounding: equipment working near energized lines should be grounded per utility procedures

9.0 ARC FLASH PROTECTION

- Arc flash hazard analysis per NFPA 70E for all electrical work
- FR (flame-resistant) clothing rated for the incident energy level
- Face shield and balaclava rated for arc flash exposure
- Arc-rated PPE categories: 1 (4 cal/cm²), 2 (8), 3 (25), 4 (40)
- No synthetic clothing (melts to skin). Natural fibers or FR-rated only.

10.0 TRAINING AND QUALIFICATION

- Qualified employee: trained and demonstrated proficiency in distinguishing energized parts, determining voltages, maintaining MAD
- First aid/CPR including pole-top rescue
- Rubber glove and live-line tool procedures
- Arc flash awareness and PPE selection
- Equipment-specific training (bucket truck, digger derrick, puller-tensioner)
- Refresher training when procedures change or deficiencies are observed

11.0 RECORDKEEPING

Record	Retention	Notes
Rubber insulating equipment test records	Until next test or disposal	Per ASTM test schedule
Live-line tool test records	Until next test or disposal	Annual minimum
Energized work permits	Project duration + 3 years	Per work event
Training/qualification records	Duration of employment	All line workers
Arc flash analysis	Life of equipment + updates	Per NFPA 70E
Incident/near-miss reports	5 years	OSHA 300 log

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APPENDIX A: ENERGIZED WORK PERMIT

Date: _____ Permit #: _____
 Location: _____ Voltage: _____
 Requested By: _____ Approved By: _____

Justification for energized work (why de-energizing is not feasible):

Hazard analysis:

- Voltage: _____ kV | Available fault current: _____ kA | Arc flash boundary: _____ ft
- Incident energy at working distance: _____ cal/cm2 | PPE Category: _____
- Minimum approach distance: _____ ft | Method: Rubber gloves Hot stick Other: _____

Personnel assigned (qualified employees only):

PPE required: FR clothing Arc-rated face shield Rubber gloves class: ____ Insulating blankets
 Other: _____

Requesting Employee: _____ Date: _____

Supervisor Approval: _____ Date: _____

Safety Director Approval: _____ Date: _____

