Construction – Most Frequently Cited Electrical Standards

This document is designed to give consistent guidance for violation classification of electrical hazards. The following information and possible citations should always be supported with photos. In each case, document environmental and conductive conditions such as wet or dry location, hard use cords, etc. Document signs of thermal or physical stress such as burn marks and strained cords. Employee access to live bare conductors will always be classified as serious. These scenarios were based on the 20 most commonly cited electrical hazards. This tool is to help as a guideline; citations may vary depending on the exact situation encountered.

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Hazard/Condition	**Resulting Injury**	**Standard(s) Violated**	**Other Than Serious**	**Serious**	
Electrical equipment not free from recognized hazards. Cover missing – employees likely to come in contact with live parts.	Electrical shock, burns or electrocution	1926.403(b)(1)		X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Electrical equipment not free from recognized hazards likely to cause death or serious harm to employees – electrical insulation not adequate.	Electrical shock, burns or electrocution	1926.403(b)(1)(iii)		X	 Photo: NCDOL - OSH

Construction – Most Frequently Cited Electrical Standards

Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Installation and use of electrical equipment was not used in accordance with its listing and labeling. Panel not listed or labeled for a damp/wet location.	Electrical shock, burns or electrocution	1926.403(b)(2)		X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Identification of disconnecting means and circuits not legibly marked.	Delay in disconnecting electrical circuit/equipment creating worse electrical condition whether fire or stray current. Injury would be based on conditions observed	1926.403(h)	X		 Photo: NCDOL - OSH

Electrical panel with all circuit breakers legibly marked.

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Live parts of electric equipment operating at 50 volts or more – not guarded against accidental contact.	Electrical shock, burns or electrocution Possible arc flash – burns	1926.403(i)(2)(i)		X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Entrances to rooms and other guarded locations containing exposed live parts not marked with signs. Unqualified persons not allowed to enter.	Electrical shock, burns or electrocution	1926.403(i)(2)(iii)		X	 Photo: NCDOL - OSH

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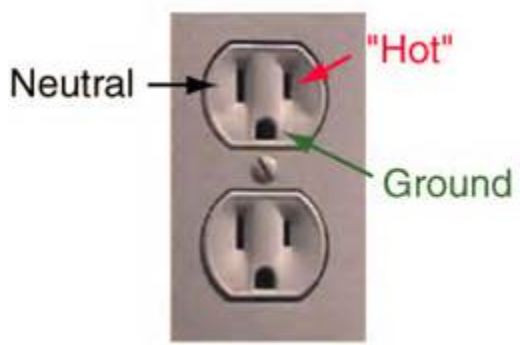
Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Grounded conductor must not be attached to any terminal or lead so as to reverse designated polarity.	Electrical shock, burns or electrocution	1926. 404(a)(2)	X (No exposed metal parts, working GFCI)	X	

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
GFCIs or AEGCP not used to protect employees on construction site.	Electrical shock, burns or electrocution	1926.404(b)(1)(i)		X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Ground-fault circuit interrupters not installed on 120-volt, single-phase, 15 and 20-ampere receptacle outlets.	Electrical shock, burns or electrocution	1926.404(b)(1)(ii)		X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Electrical equipment connected by cord and plug not visibly inspected each day before use for defects.	Electrical shock, burns or electrocution	1926.404(b)(1)(iii)(c)	X (working GFCI)	X	 Photo: NCDOL - OSH
Electrical equipment connected by cord and plug not visibly inspected each day before use for defects. Ground prong missing on extension cord. Tool not double insulated.	Electrical shock, burns or electrocution	1926.404(b)(1)(iii)(c) 1926.404(f)(6)	X (working GFCI)	X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
No violation – photo provided for informational purposes only. ***Note:*** *All conditions listed below must be met to be in-compliance.*		Applicable standard would be: 1926.404(f)(3)(i)	X (working GFCI)	X	 Photo: NASA.GOV

Portable generators. *Under the following conditions, the frame of a portable generator need not be grounded and may serve as the grounding electrode for a system supplied by the generator:*

1926.404(f)(3)(i)(A) *The generator supplies only equipment mounted on the generator and/or cord- and plug-connected equipment through receptacles mounted on the generator, and*

1926.404(f)(3)(i)(B) *The noncurrent-carrying metal parts of equipment and the equipment grounding conductor terminals of the receptacles are bonded to the generator frame.*

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
No violation – photo provided for informational purposes only. ***Note:*** *All conditions listed below must be met to be in-compliance.*		Applicable standard would be: 1926.404(f)(3)(ii)			 Photo: Internet

Vehicle-mounted generators. *Under the following conditions the frame of a vehicle may serve as the grounding electrode for a system supplied by a generator located on the vehicle:*

1926.404(f)(3)(ii)(A) *The frame of the generator is bonded to the vehicle frame, and*

1926.404(f)(3)(ii)(B) *The generator supplies only equipment located on the vehicle and/or cord- and plug-connected equipment through receptacles mounted on the vehicle or on the generator, and*

1926.404(f)(3)(ii)(C) *The noncurrent-carrying metal parts of equipment and the equipment grounding conductor terminals of the receptacles are bonded to the generator frame, and*

1926.404(f)(3)(ii)(D) *The system complies with all other provisions of this section.*

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Hazard/Condition	**Resulting Injury**	**Standard(s) Violated**	**Other Than Serious**	**Serious**	
Path to ground from equipment was not permanent and continuous. Ground prong missing on male plug. Tool not double insulated. Used in damp/wet location.	Electrical shock, burns or electrocution	1926.404(f)(6)	X (working GFCI)	X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Flexible cord not protected from damage. Driven over by forklift.	Electrical shock, burns or electrocution Short could ignite fire	1926.405(a)(2)(ii)(I)	X (working GFCI, no bare conductors)	X (Bare)	 Photo: NCDOL - OSH
Flexible cord not protected from damage. Cord passing through doorway.	Electrical shock, burns or electrocution Short could ignite fire	1926.405(a)(2)(ii)(I)	X (working GFCI, no bare conductors)	X (Bare)	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Flexible cord used with portable electric tools was not designed for hard or extra-hard usage.	Electrical shock, burns or electrocution	1926.405(a)(2)(ii)(J)	X (Working GFCI)	X (If conductor is exposed under the tape)	 Photo: NCDOL - OSH

NOTE: *The National Electrical Code, ANSI/NFPA 70, in Article 400, Table 400-4, lists various types of flexible cords, some of which are noted as being designed for hard or extra-hard usage. Examples of these types of flexible cords include hard service cord (types S, ST, SO, STO) and junior hard service cord (types SJ, SJO, SJT, SJTO).*

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Temporary wiring over 600 volts – effective means not provided to prevent access of other than authorized and qualified personnel.	Electrical shock, burns or electrocution	1926.405(a)(2)(iii)		X	 Photo: NCDOL - OSH

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Conductors entering cutout boxes, etc. not protected from abrasion.	Electrical shock, burns or electrocution	1926.405(b)(1)	No signs of abrasion	X	 Photo: NCDOL - OSH
Unused openings not effectively closed.				X	 Photo: NCDOL - OSH

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Pull boxes, junction boxes and fittings not provided with covers. Metal covers must be grounded. Covers of outlet boxes having holes must be provided with bushings.	Electrical shock, burns or electrocution Fire	1926.405(b)(2)		X	 Photo: NCDOL - OSH

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Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Flexible cords not used in continuous lengths without splice to tap. Improper splice. (confirm with tape removal by employer)	Electrical shock, burns or electrocution	1926.405(g)(2)(iii)	X (working GFCI)	X	 Photo: NCDOL - OSH

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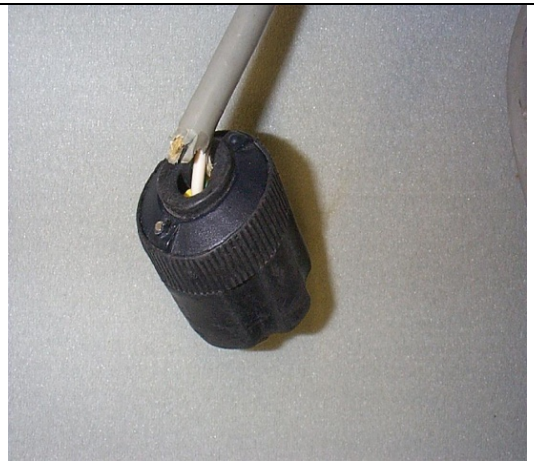
Hazard/Condition	**Resulting Injury**	**Standard(s) Violated**	**Other Than Serious**	**Serious**	
Flexible cords and cables not properly connected to devices and fittings. Strain relief not provided.	Electrical shock, burns or electrocution	1926.405(g)(2)(iv)	X (working GFCI, no exposed live parts.)	X (Bare conductor exposed)	 Photo: NCDOL - OSH

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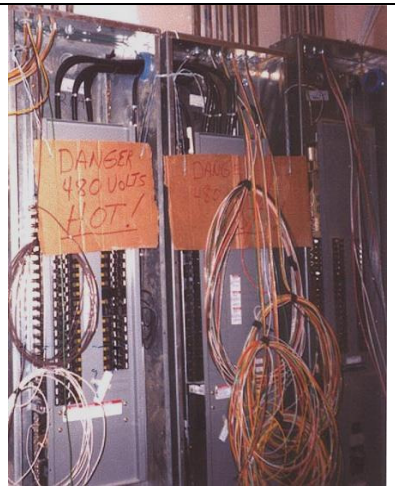
Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Employee permitted to work in proximity of electric power circuit where contact could be made. Electric power circuit not deenergized and grounded or guarded effectively.	Electrical shock, burns or electrocution Arc Flash	1926.416(a)(1) 1926.405(b)(3)(i)		X X	 Photo: NCDOL - OSH
Employee permitted to work in proximity of electric power circuit where contact could be made. Electric power circuit not deenergized and grounded or guarded effectively.	Electrical shock, burns or electrocution	1926.416(a)(1) 1926.405(b)(3)(i)		X X	 Photo: NCDOL – OSH

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Energized electrical power circuit (exposed or concealed) not located by inquiry, observation, or instruments to prevent physical or electrical contact with power circuit.	Electrical shock, burns or electrocution	1926.416(a)(3)		X	 Photos: NCDOL - OSH 

Instrument being used to locate underground electrical lines.

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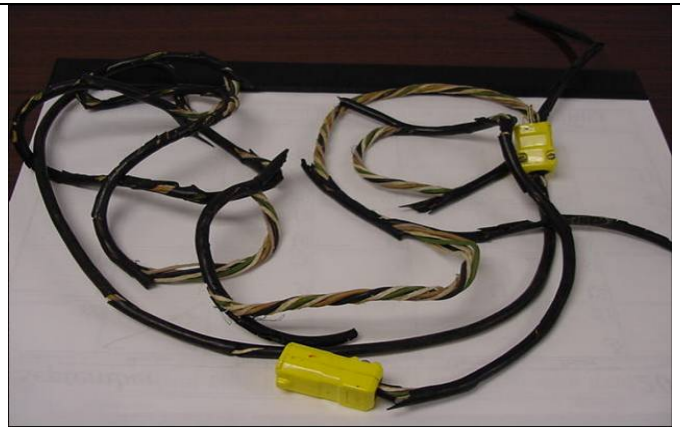
Hazard/Condition	Resulting Injury	Standard(s) Violated	Other Than Serious	Serious	
Worn or frayed electric cords or cables used. Could possibly energize the metal parts of the tool.	Electrical shock, burns or electrocution	1926.416(e)(1)	X (working GFCI)	X	 Photo: NCDOL - OSH (Serious if conductor is exposed)
Really frayed cord (multiple defects).	Electrical shock, burns or electrocution		X (working GFCI)	X	 Photo: NCDOL - OSH