JOB HAZARD ANALYSIS (JHA)

Business name

Document: JHA-001 Rev 1
Prepared: Nov 9, 2026
Review by: Dec 9, 2026
Highest risk after controls: Medium

1. BUSINESS AND JOB DETAILS

Job	Electrical panel upgrade	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	Electrical

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	Tell the occupants when the power will be off and arrange a supply for medical or other critical equipment	Working in an occupied home or building	**Medium Possible / Recordable / lost time**	1.1 Plan noisy, dusty or risky work for when the building is empty. [Elimination] 1.2 Close off the work area with barriers, plastic sheeting or locked doors, and put up signs. [Engineering (guarding)] 1.3 Keep fire exits and paths clear at all times. [Administrative] 1.4 Tell occupants before you turn off power, water or gas, and before noisy or dusty work. [Administrative] 1.5 Lock away tools, chemicals and materials each day, out of reach of children. [Administrative] 1.6 Clean up dust and debris at the end of each day. [Administrative]	**Low Rare / Recordable / lost time**	Site supervisor
2	Set up barriers and good lighting at the electrical panel so no one else can reach the open board	Working in an occupied home or building Poor lighting and night work Rules: 29 CFR 1926.56	**Medium Possible / Recordable / lost time**	2.1 Working in an occupied home or building: see step 1 for the full controls [Administrative] 2.2 Plan work for daylight hours where you can. [Elimination] 2.3 Set up enough temporary lighting for the task, walkways, stairs and access points. [Engineering] 2.4 Aim lights so they do not dazzle plant operators or drivers. [Engineering] 2.5 Check lighting before work starts and carry a flashlight or head lamp. [Administrative] 2.6 Wear hi-vis with reflective tape for night work. [PPE]	**Low Rare / Recordable / lost time**	Site supervisor
3	Check the old electrical panel backing board and surrounds for asbestos	Disturbing asbestos Rules: 29 CFR 1926.1101 and 40 CFR 61 Subpart M (NESHAP)	**Critical Possible / Fatality**	3.1 Treat insulation, surfacing and resilient flooring in buildings built before 1981 as asbestos unless testing shows otherwise, and get the owner's asbestos survey before you start. [Elimination] 3.2 Seal off the work area and keep everyone else out. [Engineering (guarding)] 3.3 If asbestos must be disturbed, keep it wet, use hand tools not power tools, and clean up with a HEPA vacuum. [Engineering] 3.4 Follow 29 CFR 1926.1101: competent person, work class, regulated area and exposure monitoring.	**Medium Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				[Administrative] 3.5 Commercial renovation and any demolition need a NESHAP asbestos inspection first, and demolition needs written notice to the state or EPA 10 working days before work starts (40 CFR 61 Subpart M). [Administrative] 3.6 Roofing felts, cement shingles and siding, roof coatings and old panel backboards can also contain asbestos. Test them or treat them as asbestos; asbestos roofing is removed intact with hand tools by trained workers (29 CFR 1926.1101(g)(8)). [Administrative] 3.7 Stop work straight away if you find suspect asbestos. Do not touch it and tell your supervisor. [Administrative] 3.8 Wear a fit-tested NIOSH-approved respirator suited to the work class, and disposable coveralls. [PPE]		
4	Have the utility disconnect the service (pull the meter or cut the service drop), open the main, apply lockout/tagout and test to prove dead. Treat the line side and service conductors as energized until the utility confirms the disconnect (NFPA 70E, 29 CFR 1926.417)	Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	4.1 Isolate the power before any work. Do not work live. [Elimination] 4.2 Lock out and tag the disconnecting means with your own personal lock and tag so the circuit cannot be energized (29 CFR 1926.417). [Engineering (guarding)] 4.3 Electric shock from live wiring: see step 10 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
5	Check the tester on a known live source before and after proving dead	Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	5.1 Test before you touch: prove dead at the point of work with a tested voltage tester. [Engineering] 5.2 Only qualified persons work on or near exposed energized parts. [Administrative] 5.3 Electric shock from live wiring: see step 10 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
6	Remove the old electrical panel, labeling every circuit as it comes off	Electric shock from live wiring Cuts from sharp edges Lifting and carrying heavy loads Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	6.1 Check for back feeds from solar, batteries and generators that can keep a circuit live after the main switch is off. [Administrative] 6.2 If energized work cannot be avoided, use an energized work permit, a safety observer and insulated tools, following NFPA 70E. [Administrative] 6.3 Electric shock from live wiring: see step 10 for the full controls [Administrative] 6.4 Deburr or cover sharp edges, and fit edge protectors on exposed sheet metal. [Engineering] 6.5 Use knives with retractable or self-retracting blades. [Engineering] 6.6 Cut away from your body and keep your other hand clear. [Administrative] 6.7 Put used blades in a blade bin or sharps container. [Administrative] 6.8 Use two people to handle large sheets of metal or glass.	**Medium Unlikely / Recordable / lost time**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				[Administrative] 6.9 Plan to avoid carrying: have materials delivered, and old items picked up, as close as possible to where they are used. [Elimination] 6.10 Use lighter or smaller loads: order smaller bags and shorter lengths, and drain or break down old items before moving them. [Substitution] 6.11 Use trolleys, pallet jacks, hoists, vacuum lifters or plant instead of carrying by hand. [Engineering] 6.12 Use a two-person lift for anything heavy, long or awkward. Plan the route first and clear it. [Administrative] 6.13 Keep the load close, back straight and no twisting. Turn with your feet. [Administrative]		
7	Mount the new enclosure, drilling with dust control and working from a stable step	Injury from power tools General dust Falling from a ladder Rules: 29 CFR 1926 Subpart I; 29 CFR 1926 Subpart X	**High Possible / Serious injury**	7.1 Keep all guards fitted and working. Never tie back or remove a guard. [Engineering] 7.2 Clamp or secure the work piece. Do not hold it by hand. [Engineering] 7.3 Only trained, competent people use power tools, following the maker's instructions. [Administrative] 7.4 Check tools before use. Unplug or remove the battery before changing blades or bits. [Administrative] 7.5 No loose clothing, jewelry or long hair near spinning parts. [Administrative] 7.6 Use low-dust products, such as dust-reduced or pre-mixed compounds. [Substitution] 7.7 Seal off the work area with plastic sheeting in occupied buildings. [Engineering (guarding)] 7.8 Use tools with dust extraction and a vacuum for clean up. [Engineering] 7.9 Lightly mist the area with water to keep dust down, away from anything electrical. [Engineering] 7.10 Never dry sweep or blow dust off with compressed air. [Administrative] 7.11 Use a platform ladder, mobile scaffold or aerial lift for longer jobs instead of a straight ladder. [Substitution] 7.12 Use Type I, IA or IAA ladders in good condition. Tag and remove any damaged ladder. [Engineering] 7.13 Set extension ladders at a 4 to 1 angle on firm, level ground, secured, and reaching 3 feet above the landing. [Engineering] 7.14 Use ladders only for short, light work. Do not carry heavy or awkward loads up a ladder. [Administrative] 7.15 Keep three points of contact and your belt buckle between the stiles. Do not overreach. [Administrative]	**Medium Unlikely / Serious injury**	Site supervisor
8	Terminate circuits, adding GFCI and AFCI protection where the NEC requires it, and torque connections to the	Electric shock from cords and power tools Repetitive work and awkward postures	**High Possible / Serious injury**	8.1 Use battery-powered tools where you can. [Substitution] 8.2 Use GFCIs on all 120-volt, 15, 20 and 30 amp temporary receptacles, or a written assured equipment grounding conductor program run by a competent person with recorded	**Medium Unlikely / Recordable / lost time**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
	values on the equipment label	Rules: 29 CFR 1926 Subpart K		tests (29 CFR 1926.404(b)(1)). [Engineering] 8.3 Keep cords off the ground and out of water, using stands or hooks. [Engineering] 8.4 Check cords, plugs and tools before every use. Tag out and remove anything damaged. [Administrative] 8.5 Do not use tools in rain or wet areas unless they are rated for it. [Administrative] 8.6 Wear safety boots and dry gloves. [PPE] 8.7 Use tools that cut the effort: powered screwdrivers, long-handled tools and extension poles for overhead work. [Substitution] 8.8 Set work up at waist height on benches or trestles where you can. [Engineering] 8.9 Use light tools with good grips, and keep blades and bits sharp. [Engineering] 8.10 Rotate tasks and take short breaks every hour on repetitive work. [Administrative] 8.11 Warm up before heavy physical work and report aches and pains early. [Administrative] 8.12 Wear knee pads for kneeling work and gloves for grip. [PPE]		
9	With your lock still on, test insulation resistance, polarity, and grounding and bonding, and check every circuit lands on the right breaker	Electric shock from live wiring Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	9.1 Wear insulated gloves, arc-rated clothing and a face shield when testing or working near live parts. [PPE] 9.2 Electric shock from live wiring: see step 10 for the full controls [Administrative]	**Medium Rare / Fatality**	Site supervisor
10	Get the inspection from the authority having jurisdiction (the utility usually reconnects only after it passes). Remove your lock only when everyone is clear, re-energize, test GFCI and AFCI devices with their test buttons and check voltage at outlets, complete the panel directory and clean up	Electric shock from live wiring Poor housekeeping and waste Rules: 29 CFR 1926 Subpart K	**Critical Possible / Fatality**	10.1 Isolate the power before any work. Do not work live. [Elimination] 10.2 Lock out and tag the disconnecting means with your own personal lock and tag so the circuit cannot be energized (29 CFR 1926.417). [Engineering (guarding)] 10.3 Test before you touch: prove dead at the point of work with a tested voltage tester. [Engineering] 10.4 Only qualified persons work on or near exposed energized parts. [Administrative] 10.5 Check for back feeds from solar, batteries and generators that can keep a circuit live after the main switch is off. [Administrative] 10.6 If energized work cannot be avoided, use an energized work permit, a safety observer and insulated tools, following NFPA 70E. [Administrative] 10.7 Wear insulated gloves, arc-rated clothing and a face shield when testing or working near live parts. [PPE] 10.8 Order materials to size and send packaging back where you can. [Elimination] 10.9 Put dumpsters and waste chutes close to the work. [Engineering] 10.10 Clean as you go, and do a full clean up at the end of	**Medium Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				each day. [Administrative] 10.11 Keep exits, stairs and walkways clear at all times. [Administrative] 10.12 Stack materials neatly on level ground, away from edges. [Administrative] 10.13 Wear gloves when handling waste. [PPE]		

Risk key: risk = likelihood x consequence on a 5 x 5 matrix. Low, Medium, High, Critical. Work must not start while the risk after controls is high or above. Controls are listed in order of the hierarchy of controls: Elimination, Substitution, Engineering (guarding), Engineering, Administrative, PPE.

3. PPE AND PERMITS

Required PPE	Permits and plans
Safety-toe boots (ASTM F2413) Safety glasses (ANSI Z87.1) Rubber insulating gloves Arc flash PPE (NFPA 70E) N95 respirator High-visibility safety apparel, ANSI/ISEA 107 Class 2 or 3 (Type R near roadways) Half-face respirator (P100 cartridges) Coveralls Work gloves Cut-resistant gloves Hearing protection (earmuffs or plugs) Hard hat (ANSI Z89.1) Knee pads	Lockout/tagout (1926.417)

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Electrical test meter		Rated for the voltage and category (CAT III or IV), inspected before each use, and checked on a known source before and after testing (NFPA 70E)			
Hand tools					
Power drill		Visual check of cord, plug and guards before each day's use; if you run an assured equipment grounding program instead of GFCIs, test every 3 months (29 CFR 1926.404(b)(1))			
Step ladder		Inspected by a competent person for visible defects periodically and after any event that could affect safe use (29 CFR 1926.1053(b)(15))			

5. TRAINING REQUIRED FOR THIS WORK

- Asbestos awareness training, plus class-specific training for Class I to III work (29 CFR 1926.1101(k)(9)); respirator fit test and medical evaluation (29 CFR 1910.134)
- Qualified person training for work on or near exposed energized parts (29 CFR 1926.416, NFPA 70E)
- Ladder safety training by a competent person (29 CFR 1926.1060)

6. CREW TRAINING AND CERTIFICATIONS

Crew listed at sign-on below, with ticket and licence numbers.

7. EMERGENCY ARRANGEMENTS

Emergency number	911	**First aid kit**	In the work vehicle
Fire extinguisher	In the work vehicle	**Alarm and evacuation**	Shout for help and stop work. Make the area safe and go to the assembly point. Call the emergency number and send someone to meet the ambulance.
Reporting incidents	Report a fatality to OSHA within 8 hours, and an in-patient hospitalization, amputation or eye loss within 24 hours.		

8. MONITORING, REVIEW AND LEGAL BASIS

A competent person inspects the job site, materials and equipment before work each day and as conditions change (29 CFR 1926.20(b)(2)). Any time this JHA is revised, the affected crew is re-briefed and signs again.

Legal basis: OSH Act Section 5(a)(1) and 29 CFR 1926, Safety and Health Regulations for Construction (incl. 1926.20 and 1926.21). OSHA requires employers to find and fix hazards and to train workers on them. A JHA breaks the job into steps, lists the hazards in each step and the controls that protect the crew. General contractors often require one before you start.

Keep this JHA on site during the job, and keep it with the training and inspection records for at least 1 year after the job (longer if your state plan or general contractor requires it). OSHA does not set a retention period for JHAs themselves.

9. REVISION HISTORY

Rev	Date	By	What changed
1	Nov 9, 2026		First issue

10. SIGN-OFF

	Name	Signature	Date	
Prepared by				
Supervisor				
General contractor review				Accepted for use: Yes / No

By signing below, each crew member confirms they were trained on the hazards and controls in this JHA before work started, and will follow it. Stop work and tell the supervisor if conditions change.

Name	Role / company	Tickets / licences	Signature	Date

Name	Role / company	Tickets / licences	Signature	Date