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	Steel handrail and railing installation	**Start date**	Nov 9, 2026
Working hours	7:00 am to 3:30 pm	**Trade**	Welding and fabrication

2. JOB STEPS, HAZARDS AND CONTROLS

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
1	Install temporary edge protection on open edges	Falling from height Falling through a floor opening or void Rules: 29 CFR 1926 Subpart M	**Critical Likely / Fatality**	1.1 Do the work from the ground where you can, for example pre-assemble on the ground or use extension poles. [Elimination] 1.2 Install guardrails or edge protection on all open edges before work starts. [Engineering (guarding)] 1.3 Use a scaffold, mobile work platform or aerial lift instead of working off a ladder. [Engineering] 1.4 Where edge protection is not practical, use a fall restraint or fall arrest system on a rated anchor point. [Engineering] 1.5 Provide fall protection at 6 feet or more and train workers to recognize fall hazards (29 CFR 1926.503). [Administrative] 1.6 Have a rescue plan so a worker hanging in a harness can be brought down within minutes. [Administrative] 1.7 Wear a full body harness with a shock-absorbing lanyard, clipped on at all times when using fall arrest. [PPE] 1.8 Cover every hole with a secured cover marked "HOLE" or "COVER" that can hold twice the weight it may carry. [Engineering (guarding)] 1.9 Put guardrails with toe boards around stairwells, elevator shafts, floor holes and open edges. [Engineering (guarding)] 1.10 Install stairs early and fit temporary handrails as soon as they go in. [Engineering] 1.11 Never remove a cover or guardrail without approval. Put it back straight away. [Administrative] 1.12 Inspect covers and barriers daily and after other trades have been through. [Administrative] 1.13 Keep lighting good enough to see openings, especially on lower floors and in the evening. [Administrative] 1.14 Use a harness clipped to a rated anchor when working right next to an open void. [PPE]	**Medium Rare / Fatality**	Site supervisor
2	Drill anchors with dust extraction	Silica dust from concrete, brick, stone and tiles Loud noise	**Critical Likely / Fatality**	2.1 Order materials cut to size, or use low-dust methods such as score and snap or a block splitter. [Substitution] 2.2 Cut outdoors or in a separate area, with other people well away and upwind. [Engineering (guarding)]	**Medium Unlikely / Recordable / lost time**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
		Rules: 29 CFR 1926.1153; 29 CFR 1926.52		2.3 Use wet cutting or on-tool dust collection with a HEPA vacuum, as set out in Table 1 of 29 CFR 1926.1153. [Engineering] 2.4 Clean up with a vacuum or wet methods. Never dry sweep or use compressed air. [Administrative] 2.5 Have a written exposure control plan and a competent person for silica (29 CFR 1926.1153). [Administrative] 2.6 Workers who must wear a respirator 30 or more days a year get a free medical exam every 3 years (29 CFR 1926.1153(h)). [Administrative] 2.7 Wear the respirator Table 1 lists for the task: APF 10 (a fit-tested N95 or half mask) for most tasks, APF 25 (such as a loose-fitting PAPR) for tuckpointing with a handheld grinder for more than 4 hours a shift. [PPE] 2.8 Use quieter tools and methods, such as cut-to-size materials, low-noise machines and battery tools. [Substitution] 2.9 Keep noisy plant away from work areas, and use screens or distance between the noise and people. [Engineering (guarding)] 2.10 Keep tools maintained and use mufflers on compressors and generators. [Engineering] 2.11 Limit time on noisy tools and rotate workers. [Administrative] 2.12 If you have to shout to be heard at arm's length, wear hearing protection. [Administrative] 2.13 Wear earplugs or earmuffs rated for the noise. [PPE]		
3	Weld on site under a hot work permit	Fire from hot works Welding and cutting fumes Eye injuries Rules: 29 CFR 1926.352 and NFPA 51B (35 ft rule also in 1910.252(a)); 29 CFR 1926 Subpart J	**Critical Likely / Serious injury**	3.1 Use cold work methods where you can, such as bolting, press fittings or cutting with a saw instead of a torch. [Elimination] 3.2 Move anything that can burn at least 35 feet away, or cover it with fire blankets. [Engineering (guarding)] 3.3 Use fire-resistant screens to stop sparks reaching people or gaps in walls and floors. [Engineering] 3.4 Get a hot work permit before starting. [Administrative] 3.5 Keep a charged fire extinguisher and fire blanket at the work spot. [Administrative] 3.6 Remove paint, galvanizing and coatings from the weld area first, or use a process that makes less fume. [Substitution] 3.7 Use fume extraction (local exhaust ventilation) close to the weld. [Engineering] 3.8 Weld outdoors or in a well-ventilated area, and keep your head out of the fume plume. [Engineering] 3.9 Never weld or cut in a confined space without testing the air and using forced ventilation. [Administrative] 3.10 Wear a powered air respirator or fitted respirator when extraction is not enough. [PPE] 3.11 Use tool guards and screens to stop flying particles.	**Medium Unlikely / Serious injury**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				[Engineering] 3.12 Use dust extraction and water to keep dust out of the air. [Engineering] 3.13 Keep others out of the area when cutting, grinding or chipping. [Administrative] 3.14 Keep an eye wash station or eye wash bottles on site. [Administrative] 3.15 Wear safety glasses at all times, goggles for dust and chemicals, and a face shield for grinding. [PPE]		
4	Grind welds smooth with guards on	Angle grinder injuries Eye injuries	**High** **Possible / Serious injury**	4.1 Use a guarded saw or a different tool where you can. [Substitution] 4.2 Keep the guard on and use the side handle. Never remove the guard. [Engineering] 4.3 Use the right disc for the job, rated for the grinder's speed. Check it for cracks first. [Administrative] 4.4 Only trained people change discs, with the grinder unplugged or the battery out. [Administrative] 4.5 Keep both hands on the grinder and let the disc stop before putting it down. [Administrative] 4.6 Clamp the work and keep people out of the spark path. [Administrative] 4.7 Wear a face shield over safety glasses, hearing protection, gloves and long sleeves. [PPE] 4.8 Eye injuries: see step 3 for the full controls [Administrative]	**Medium** **Unlikely / Serious injury**	Site supervisor
5	Fire watch and clean up	Fire and emergencies Poor housekeeping and waste Rules: 29 CFR 1926 Subpart F	**High** **Unlikely / Fatality**	5.1 Provide fire extinguishers suited to the site, checked and easy to reach. [Engineering] 5.2 Keep exits and escape routes clear and signed. [Engineering] 5.3 Have a site emergency plan: alarm, exits, assembly point and emergency contacts. [Administrative] 5.4 Keep a stocked first aid kit and at least one trained first aider on site. [Administrative] 5.5 Know the site address and how emergency services get in. Call 911. [Administrative] 5.6 Go through the emergency plan with every worker and visitor at induction. [Administrative] 5.7 Keep flammable materials and rubbish away from exits and escape routes. [Administrative] 5.8 Order materials to size and send packaging back where you can. [Elimination] 5.9 Put dumpsters and waste chutes close to the work. [Engineering] 5.10 Clean as you go, and do a full clean up at the end of each day. [Administrative] 5.11 Keep exits, stairs and walkways clear at all times. [Administrative] 5.12 Stack materials neatly on level ground, away from	**Medium** **Rare / Fatality**	Site supervisor

#	Job step	Hazards	Risk before	Controls	Risk after	Responsible
				edges. [Administrative] 5.13 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) Welding helmet (ANSI Z87.1) Welding gloves Safety glasses (ANSI Z87.1) Hearing protection (earmuffs or plugs) Personal fall arrest system (harness) Half-face respirator (P100 cartridges) Face shield (ANSI Z87.1) Coveralls Safety goggles (ANSI Z87.1) Cut-resistant gloves Work gloves	Hot work permit (fire watch at least 60 minutes after, NFPA 51B)

4. PLANT AND EQUIPMENT

Plant / equipment	License or training needed	Inspection needed	Rego / ID	Last inspected	Certificate / report
Welding machine					
Angle grinder		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))			
Rotary hammer		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))			
Hand tools					

5. TRAINING REQUIRED FOR THIS WORK

- Fall protection training by a competent person, with a written certification record (29 CFR 1926.503)
- Silica training on the exposure control plan and Table 1 controls (29 CFR 1926.1153(i)); respirator fit test and medical evaluation (29 CFR 1910.134)

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