

Job Hazard Analysis (JHA)

Task: Jack Hammering in the Telecom Industry

Risk Assessment Code (RAC) Legend

- **☒ Red (High Risk):** Unacceptable—stop work and implement controls before proceeding.
- **☑ Yellow (Moderate Risk):** Proceed with caution—implement and verify controls.
- **☐ Green (Low Risk):** Acceptable—maintain controls and continuous monitoring.

Overall Initial RAC for Jack Hammering Task: ☒ High Risk

Job Steps, Hazards, and Controls

Step No.	Task Description	Potential Hazards	Controls / Safe Work Practices	Initial RAC
1	Pre-job planning & scope review	Incomplete scope; missing permits; unverified utilities	Conduct tailboard/JSA meeting; review cut/break plan; confirm 811/One-Call ticket; coordinate with utility owners; assign stop-work authority.	☒
2	Material staging (jackhammer, air compressor, hoses, PPE)	Struck-by rolling equipment; trip hazards; improper storage of hoses	Stage tools on level ground; coil and secure hoses; barricade storage area; maintain housekeeping.	☒
3	Traffic control setup (if working near roadway/sidewalk)	Vehicle strikes; pedestrian hazards; poor visibility	Implement MUTCD-compliant traffic control; cones, barricades, advance warning signs; certified flaggers; ANSI/ISEA 107 Class 2/3 apparel; lighting for night work.	☒
4	Equipment inspection	Equipment failure; damaged hoses; malfunctioning compressor	Inspect jackhammer, bit, hoses, and compressor daily; check for leaks; ensure guards in place; replace worn parts.	☒
5	Lifting and positioning jackhammer	Musculoskeletal strain; back injury; pinch points	Use team lift or mechanical assist for large jackhammers; keep back straight, lift with legs; wear gloves for grip.	☒
6	Operating jackhammer on concrete/asphalt	Flying debris; noise; vibration; silica dust exposure; loss of control	Wear safety glasses and face shield; hearing protection; anti-vibration gloves; dust suppression with water; NIOSH-approved respirator if dust present; maintain stable stance.	☒

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7	Managing hoses and compressor	Hose whip; tripping hazards; struck-by from pressure release	Inspect and secure hose connections; route hoses away from walkways; release pressure before disconnecting; barricade work area.	?
8	Working near utilities	Striking live or unknown utilities (gas, electric, telecom)	Expose utilities with vacuum/hand tools before jackhammering; maintain OSHA/NESC clearances; coordinate with utility owners; stop work if resistance is encountered.	?
9	Handling debris and broken concrete/asphalt	Cuts from sharp edges; flying chips; heavy lifting injuries	Use shovels and wheelbarrows for debris; wear cut-resistant gloves; steel-toe boots; team lift large sections; dispose of properly.	?
10	Noise and vibration exposure	Hearing loss; hand-arm vibration syndrome (HAVS)	Rotate operators; enforce hearing protection >85 dBA; use anti-vibration gloves; limit exposure duration.	?
11	Refueling air compressor or generator	Fire hazard; chemical burns; fume inhalation	Refuel with engine off and cooled; store fuel in OSHA-approved containers; wear chemical-resistant gloves; no smoking/open flames.	?
12	Weather/environmental conditions	Heat stress, cold stress, slippery conditions	Provide hydration/rest breaks in hot weather; insulated PPE in cold; wear slip-resistant boots; suspend work during lightning.	?
13	Housekeeping & cleanup	Slips/trips on debris; improper disposal	Remove debris promptly; keep work zone clear of loose material; dispose of rubble at approved sites; sweep area before demobilization.	?
14	Removing traffic control & demobilization	Vehicle strikes during removal	Remove devices in reverse order; keep flaggers until last cone removed; final walkdown inspection.	?
15	Documentation & turnover	Missing records; regulatory non-compliance	Record location, dimensions, and depth of removal; photograph work; update as-builts; submit to utility owner/inspector.	?

PPE Requirements

- **Head/Face/Eye:** Hard hat (ANSI Z89.1); safety glasses (ANSI Z87.1); face shield during jackhammer operation.
- **Hearing:** Hearing protection when exposed to noise >85 dBA.
- **Hands:** Cut-resistant and anti-vibration gloves.
- **Feet:** Safety-toe boots with slip-resistant soles.

- **High-Visibility Apparel:** ANSI/ISEA 107 Type R, Class 2 (day) or Class 3 (night/high-speed).
 - **Respiratory:** Dust mask or respirator for silica dust control.
 - **Weather-Specific:** Rain gear, thermal PPE, or UV protection as required.
 - **Fall Protection:** Required if operating jackhammer near open excavations >6 ft.
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Regulatory & Industry Practice Alignment (summary)

- **OSHA:** 29 CFR 1926 Subpart E (PPE), Subpart O (Motor Vehicles/Mechanized Equipment), Subpart P (Excavations if jackhammering near trenches), Subpart M (Fall Protection), Subpart Z (Hazardous Substances—silica dust, noise, fumes).
- **NIOSH:** Guidance on noise and vibration exposure, silica dust control, ergonomic safe lifting.
- **ANSI/ISEA:** ANSI/ISEA 107 (high-visibility apparel), ANSI Z87.1 (eye protection), ANSI Z89.1 (head protection), ANSI Z359 (fall protection).
- **NESC:** Utility clearance/separation standards when jackhammering near telecom/power facilities.
- **MUTCD:** Work zone traffic control standards for roadway jackhammer operations.