Job Hazard Analysis (JHA)

Task: Asphalt Cutting 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 Asphalt Cutting 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; failure to coordinate with utilities	Conduct tailboard/JSA meeting; review prints and cut path; confirm 811/One-Call ticket; coordinate with utility owners; assign stop-work authority.	
2	Material staging (saws, blades, fuel, PPE, water supply)	Struck-by falling tools; trip hazards; improper storage of flammables	Stage saws and tools on level ground; secure fuel in approved containers; maintain housekeeping; keep equipment out of traffic path.	
3	Traffic control setup (if cutting in roadway/sidewalk)	Vehicle strikes; inadequate signage; pedestrian exposure	MUTCD-compliant traffic control; deploy cones, barricades, and advance warning signs; certified flaggers; ANSI/ISEA 107 high-visibility garments; lighting for night work.	
4	Pre-use equipment inspection	Equipment failure; blade cracks; fuel leaks	Inspect saw, guards, and blade; ensure water suppression system works; check fuel/oil lines; replace damaged blades.	
5	Lifting and positioning saw	Ergonomic strain; pinch points	Use two-person lift or mechanical assist for large saws; maintain proper lifting posture; wear gloves for grip.	
6	Cutting asphalt with saw	Flying debris; silica dust; excessive noise; vibration; kickback	Wear eye/face protection; use water suppression for dust; NIOSH-approved respirator for silica control; hearing protection; anti-vibration gloves; keep bystanders 10 ft away.	

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7	Managing slurry and water runoff	Slips from wet surface; environmental contamination	Use wet vac or barriers to contain slurry; discharge per local regulations; place signs to warn of slippery surfaces.	
8	Refueling saw	Fire hazard; chemical burns; fume exposure	Refuel outdoors with approved container; engine off and cool; wear nitrile gloves; eye protection; no smoking/open flames.	
9	Handling cut sections of asphalt	Musculoskeletal strain; crushed toes/fingers	Use pry bars and team lift; wear steel-toe boots and gloves; mechanical assist for large/heavy slabs.	
10	Working near open cut	Trips, falls, struck-by traffic	Barricade open cuts with cones or barriers; provide walk-around routes; restrict public access.	
11	Weather/environmental conditions	Heat stress, cold stress, slippery surfaces	Hydration and rest breaks in heat; cold-weather PPE; de-ice/clear work zone; suspend work during lightning.	
12	Noise and vibration exposure	Hearing damage; hand-arm vibration	Use hearing protection above 85 dBA; limit exposure duration; rotate workers; inspect tools for vibration reduction.	
13	Site cleanup and disposal	Trips from debris; improper waste handling	Remove asphalt debris promptly; dispose at approved facility; sweep area; ensure site safe before demobilization.	
14	Documentation & turnover	Missing records; regulatory non-compliance	Record location and length of cuts; photograph for QC; update as-builts; provide documentation to owner.	
15	Traffic control removal & demobilization	Vehicle strikes during removal	Remove devices in reverse order; flaggers remain until last cone removed; final walkdown inspection.	

PPE Requirements

- **Head/Face/Eye:** Hard hat (ANSI Z89.1); safety glasses with side shields (ANSI Z87.1); face shield when cutting asphalt.
- **Hearing:** Hearing protection when operating saws or exposed to >85 dBA.
- **Hands:** Cut-resistant and anti-vibration gloves; nitrile gloves when handling fuels.
- **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:** NIOSH-approved respirator for silica dust when water suppression is not sufficient.
- **Weather-Specific:** Rain gear, thermal PPE, or UV/sun protection as conditions require.

Regulatory & Industry Practice Alignment (summary)

- **OSHA:** 29 CFR 1926 Subpart E (PPE), Subpart O (Motor Vehicles/Equipment), Subpart P (Excavations if trenching follows cut), Subpart M (Fall Protection if near drop-offs), Subpart Z (Hazardous Substances—silica, fumes).
- **NIOSH:** Silica dust control guidance; ergonomic lifting practices; heat/cold stress prevention.
- **ANSI/ISEA:** ANSI/ISEA 107 (high-visibility apparel), ANSI Z87.1 (eye protection), ANSI Z89.1 (head protection), ANSI Z359 (fall protection if required).
- **NESC:** Utility clearance and separation standards when asphalt cutting near power/telecom infrastructure.
- **MUTCD:** Traffic control requirements for road/sidewalk cutting operations.