

Job Hazard Analysis (JHA)

Task: Lashing Fiber 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 Lashing Fiber 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 work plan; missing permits; inadequate coordination with utilities	Conduct tailboard/JSA meeting; review construction prints and permits; verify One-Call/811 locates; confirm joint use permissions; assign stop-work authority.	☑
2	Material staging (fiber reels, lasher, lashing wire, blocks, hardware)	Struck-by rolling reels; tripping hazards; manual handling strain	Chock fiber reels; stage materials on stable ground away from traffic; mechanical assist for heavy reels; maintain housekeeping.	☑
3	Traffic control setup (MUTCD-compliant)	Vehicle strikes; inadequate signage; poor visibility at night	Implement MUTCD-compliant plan; use cones, barricades, advance warning signs; certified flaggers; ANSI/ISEA 107 Class 2/3 garments; lighting for night work.	☑
4	Pole inspection before climbing	Pole failure due to rot, cracks, or insect damage	Sound/bore test poles; reject unsafe poles; install support/brace if necessary; follow NESC clearance standards.	☑
5	Climbing poles or using bucket truck/lift	Falls; contact with energized conductors; equipment malfunction	Use 100% tie-off fall protection; inspect climbing gear and aerial lift daily; maintain OSHA/NESC approach distances; use qualified operators.	☑
6	Setting up rollers/blocks on strand	Dropped objects; pinch points; misaligned rollers	Secure blocks with proper hardware; tether tools; barricade drop zones; maintain 3-point contact.	☑

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7	Loading fiber into blocks	Fiber bend radius violations; strain injuries; dropped cable	Use two-person team for heavy handling; maintain proper bend radius; secure fiber in rollers; communicate with ground crew.	?
8	Installing lasher on strand	Pinch/crush hazards; dropped lasher; improper securing	Tether lasher with safety chain; keep hands clear of lash points; inspect and secure strand clamps and rollers before release.	?
9	Advancing lasher along strand (lashing operation)	Snagging on hardware; cable misalignment; dropped lasher	Use tagline to control lasher; advance slowly; inspect span for obstacles; barricade pedestrian and vehicle areas below; maintain clear communication.	?
10	Securing lashing wire at poles/spans	Cuts from lashing wire; improper tie-offs; dropped tools	Wear cut-resistant gloves; tether lashing wire tools; properly terminate wires to prevent unraveling; coil and secure excess wire.	?
11	Mid-span splicing or over-lashing existing fiber	Overloading strand; cable jacket damage; contact with existing attachments	Verify strand loading capacity; protect cable jackets with rollers; follow NESC separation and clearance rules; coordinate with joint-use owners.	?
12	Crossing intersections/driveways	Struck-by vehicles; pedestrian exposure	Flaggers at crossings; traffic control devices per MUTCD; schedule off-peak; maintain exclusion zones under span.	?
13	Tensioning and sag adjustment	Snap-back of fiber; improper sag/tension; strain injuries	Use calibrated tension meters; exclusion zone under span; maintain safe fiber slack; only trained operators handle tensioning.	?
14	Weather/environmental conditions	Lightning; high winds; slick or icy conditions	Suspend work during thunderstorms or high winds; monitor weather; wear weather-appropriate PPE; de-ice equipment and boots.	?
15	Removing lasher and rollers after lashing	Dropped lasher; improper removal; pinched fingers	Lower lasher via rope or bucket, not free drop; remove rollers systematically; tether tools and hardware.	?
16	Quality check of lashing operation	Missed defects; loose wire ties; improper spacing	Inspect every span visually; check tie spacing; correct deficiencies before demobilization; document QC.	?
17	Documentation & as-builts	Missing records; non-compliance	Record fiber path, sag/tension readings, and lashing completion; photograph attachments; update as-builts; submit to utility owner.	?

Step No.	Task Description	Potential Hazards	Controls / Safe Work Practices	Initial RAC
18	Traffic control removal & demobilization	Vehicle strikes during removal	Remove traffic control devices in reverse order; keep flaggers until last cone removed; post-job site inspection.	?

PPE Requirements

- **Head/Face/Eye:** Hard hat (ANSI Z89.1); safety glasses with side shields (ANSI Z87.1); face shield when working with lashing wire.
- **Hearing:** Hearing protection if exposed to >85 dBA (lashers, impact tools).
- **Hands:** Cut-resistant gloves; insulated gloves if near energized conductors (qualified personnel only).
- **Feet:** Safety-toe boots with slip-resistant soles.
- **Fall Protection:** Full-body harness with shock-absorbing lanyard or SRL; 100% tie-off when climbing poles or working from lifts.
- **High-Visibility Apparel:** ANSI/ISEA 107 Type R, Class 2 (day) or Class 3 (night/high-speed).
- **Respiratory:** Dust mask/respirator if drilling poles or exposed to particulate hazards.
- **Weather-Specific:** Rain gear, insulated clothing, or UV protection as applicable.

Regulatory & Industry Practice Alignment (summary)

- **OSHA:** 29 CFR 1926 Subpart M (Fall Protection), Subpart V (Power Transmission/Distribution), Subpart E (PPE), Subpart O (Motor Vehicles/Equipment).
- **NIOSH:** Safe climbing practices, ergonomic handling of fiber reels, struck-by prevention.
- **ANSI/ISEA:** ANSI/ISEA 107 (high-visibility apparel), ANSI Z359 (fall protection), ANSI Z87.1 (eye protection).
- **NESC:** Strand loading, clearances, and attachment spacing for fiber installations.
- **MUTCD:** Work zone traffic control standards for aerial construction.