

## Using holiday lights safely on tower cranes

Lighting displays are part of the holiday season for many, including crane companies that carry on a tradition of decorating their cranes with holiday lights. Lighting displays on cranes need to be planned carefully and installed safely so they won't create risks for workers.

### What are the hazards?

#### Blocking access points

Holiday lights blocking access points can prevent crane operators and workers doing inspections, maintenance, or repairs from being able to move around. The lights can also create a tripping hazard.

#### Increasing the crane's sail area

Any additions to a crane increase its sail area and the potential wind force on it. Adding holiday lights or other decorations to the sail area may prevent an out-of-service crane from free slewing downwind. If the crane isn't able to "weather vane" freely, the resulting stresses on the tower structure or the base could lead to a catastrophic failure.

#### Interfering with fall protection equipment

If holiday lights or extension cords interfere with fall protection equipment, they could damage the lifeline and put workers at risk.

#### Electrical hazards

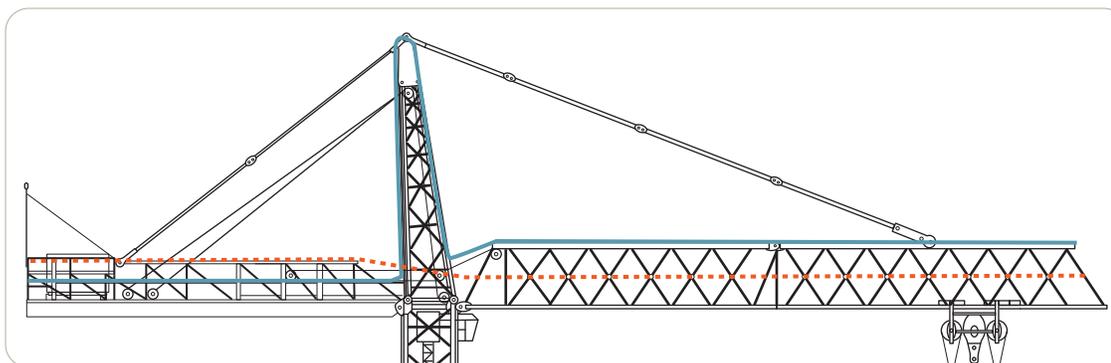
Damaged cords and broken light bulbs can create electrical hazards.

### Responsibilities

Holiday lighting displays installed on tower cranes should be planned carefully and installed only with the authorization of the crane manufacturer.

#### Risk assessment

The crane employer must carry out a risk assessment as part of the process of designing



Holiday lights must not block access points or guardrails and must not interfere with fall protection equipment.

- Safe installation path for lights
- - - Unsafe installation path

holiday displays. The risk assessment should consider:

- The effect of the decorations on the crane's sail area
- Effects of lighting glare on the crane operator
- Provision of a suitable power supply and safe, adequate electrical isolation
- Installation, maintenance, and removal of the decorations

### Other employer responsibilities

The employer is responsible for ensuring the following:

- The workplace is planned, constructed, used, and maintained to protect workers.
- Crane modifications are carried out according to safe work practices and the requirements of the Occupational Health and Safety Regulation.
- The crane's jib has a continuous, obstruction-free walkway from the mast to the tip.

### Worker responsibilities

Workers who install or work around the lighting display must follow safe work procedures.

Workers must not remove or disable any safeguards provided.

### Safe work practices

Follow these safe work practices when planning and installing holiday lighting displays:

- Keep jib access points, walkways, and fall protection systems clear of holiday lights and extension cords.
- Secure all extension cords and strings of lights (e.g., with electrical tape or zip ties) to avoid creating tripping hazards.
- Use lights that are rated for outdoor use (e.g., lights with a CSA, cUL, or cETL certification). Never use indoor-only lights to decorate cranes.

- When installing holiday lights, follow the requirements of the Canadian Electrical Code.
- When installing lights or other decorations, don't increase the sail area of the crane beyond what the manufacturer recommends.
- Consider using durable, high-output LED bulbs. Holiday lighting displays generally have many lights that are difficult to access. Filament bulbs need a lot of maintenance and can injure workers or cut cables if they break.
- Before plugging in holiday lights, inspect them to make sure they're in good condition. Check for cracked or frayed cords, wires poking through the insulation, and sockets without bulbs. Dispose of damaged or frayed strings of lights.
- Have a licensed electrician install the ground-fault circuit interrupter (GFCI) used for the holiday lights.
- Secure any attachments for lights or signs so they won't come loose. These attachments must be designed to withstand wind loads and dynamic forces.
- If possible, install holiday lights while the crane is on the ground, before its erection.
- Inspect and maintain holiday lights regularly.

### For more information

#### Occupational Health and Safety Regulation

- [Section 14.88, Access](#)
- [Section 14.92, Wind limitations](#)
- [Section 19.15, Ground fault circuit interrupters](#)

#### Standards

#### CSA Standard Z248-04 Code for Tower Cranes

For additional information and resources, visit [worksafebc.com/cranes](http://worksafebc.com/cranes) or [bccranesafety.com](http://bccranesafety.com).

