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| **Department:** | **Eng. & Public Works**  | **Area:** | **Construction**  |  |
| **Subject:** | **Working Around Overhead Lines**  |

**OVERHEAD LINES SAFEWORK PROCEDURES**

**Background:**

Working around overhead lines is a constant activity for many municipal workers. Overhead lines are composed of; cable and telephone lines which are generally harmless and electrical lines that can be potentially lethal. The possibility of serious injury or death to yourself and the public is great if proper safe work procedure and OSH regulations are not followed. Owners’ of utilities have independent rules of approach and procedures. Knowing and conforming to these rules is essential for maintaining a safe work environment. These rules and regulations have been developed in response to incidents in the past to prevent reoccurrences

**Hazards:**

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| * Electric shock
 | * Electrocution
 | * Bodily harm
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**PPE Required:**

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| * Hard hat
 | * CSA approved footwear,
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| * Eye and ear protection
 | * High visibility vest or coveralls
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**Identify overhead lines:**

* Critical to determine which lines will be inside your work zone
* Generally phone and cable lines are strung below electrical lines on the poles
* Recognize any lines that may interfere with machinery
* Once a line is identified as electrical, the Voltage must be determined, and the limits of approach applied

**Know the Limits of Approach:**

* Hydro or electrical lines are hazardous and Worksafe BC have a OSH regulation regarding approach Section 19.24:

*(1) The employer must ensure that at least the minimum applicable distance specified in Table 19-1 is maintained between exposed, energized high voltage electrical equipment and conductors and any worker, work, tool, machine, equipment or material, unless otherwise permitted by this Part.*

*(2) The employer must accurately determine the voltage of any energized electrical equipment or conductor and the minimum distance from it required by subsection (1).*

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| **Table 19-1: General limits of approach** |
| Voltage | Minimum distance |
| Phase to phase | Metres | Feet |
| Over 750 V to 75 kV | 3 | 10 |
| Over 75 kV to 250 kV | 4.5 | 15 |
| Over 250 kV to 550 kV | 6 | 20 |

* If encroachment on these limits is necessary to complete work, BC Hydro and Worksafe BC must be notified and further precautions taken.

**Working around overhead lines:**

* All workers and operators need to be aware of the location and type of overhead lines in their work area and the hazards those lines present.
* If required, Utility owners will often mark or “flag” lines that will be within the operation limits of machinery.
* A spotter is required if an operator cannot see, or has an obstructed view of an overhead line.
* Plan your work to avoid electrical contact.

**Spotting:**

* Spotter maintains a clear view of machine operator and overhead lines to direct the operators actions around the hazard in a safe manner
* Spotters and operators shall use mutually agreed upon hand signals
* All workers need to take the responsibility of spotting if they see potential contact with overhead lines

**Damage or Contact:**

* If you damage an overhead line, the owner of the utility must be notified
* If your equipment makes electrical contact or you knock down electrical lines
* Stay in your machine until help arrives
* Call Nanaimo 1 with your location and advise dispatch of the situation. If there is an immediate threat to life or fire have Nanaimo 1 contact 911, if not contact BC Hydro
* If in a life threatening situation, jump clear of vehicle, feet together, and shuffle away keeping both feet close together. Never contact the ground and vehicle at the same time. Shuffle approximately 10 metres away
* Keep all workers and pedestrians minimum 10 metres back
* If the ground is energized while you work, avoid shock by keeping your feet close together and shuffle away – never allowing the heel of one foot to move beyond the toe of the other.

Overhead lines are generally configured with the dangerous lines above the safer lines to stop potential hazardous contact. If these procedures are followed and all workers apply their attention and common sense, overhead wires can be worked around safely.

**Summary:**

* **“**Look up and live**”** always be aware of overhead lines on jobsite
* Take the responsibility to spot for all equipment with the potential to contact lines
* Know the limits of approach
* Plan ahead to avoid electrical contact
* If electrical contact is made, know how stay safe.

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| **Revised:** | **Approved by: Dave Benere**  |