

<b>Title</b>	Ladder Safety	<b>Date of Issue</b>	August 2010
<b>Location</b>	All City Departments	<b>Review Date</b>	August 2011
<b>Approved By</b>		<b>Signature</b>	

## Purpose

To minimize the risk of injury to employees when working on and around ladders.

## Scope

This procedure applies to all employees for the City Campbell River.

## Standards/Procedures

Metal ladders, ladders with metal reinforcement or wet wooden ladders must **NEVER** be used where any electrical hazard exists. Instead use a fiberglass ladder.

Use extreme caution when using a painted ladder. Wooden ladders should **NOT** be painted as this may hide wear or damage. A wood preservative or clear finish should be used to protect the ladder.

1. Selecting the correct size and type of ladder is essential to workers safety. The following tables will assist in selecting the proper ladder for the job.

### Ladder Selection Guide

#### Rating & Type

Wooden and Metal Ladders	Working Loads (pounds)
Extra Heavy Duty - Type IA	300
Heavy Duty - Type I	250
Medium Duty - Type II	225
Light Duty - Type III	200

## Length Requirements

<b>Extension Ladders</b>				<b>Stepladders</b>			
<b>Maximum height you need to reach</b>		<b>Size of extension ladder required</b>		<b>Maximum height you need to reach</b>		<b>Size of step ladder required</b>	
Metres (approx)	Feet	Metres (approx.)	Feet	Metres (approx.)	Feet	Metres (approx.)	Feet
2.7	9	4.8	16	1.8	6	0.6	2
4	13	6	20	2.1	7	1.2	4
5.2	17	7.3	24	2.4	5	1.5	5
6.4	21	8.5	28	2.7	9	1.8	6
7.6	25	9.8	32	3.0	10	2.1	7
8.5	28	11	36	3.4	11	2.4	8
9.5	31	12.2	40	4	13	3.0	10

2. There must be only one person on a ladder at any time.
3. Always inspect the ladder carefully before use. Follow the ladder pre-inspection checklist.
4. NEVER use makeshift items such as a chair, barrel or box, etc., as a substitute ladder.
5. NEVER remove any safety decals from ladders.
6. Any work over 10 ft or 3 meters will require a fall protection plan and appropriate fall protection equipment.

### Proper Ladder Use

#### Straight/Extension Ladders

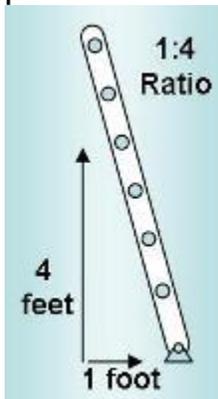
1. Always check a ladder's load capacity sticker.
2. The ladder must be long enough for the job. When a ladder is used to climb onto a platform/roof it must project at least three (3) feet (90 cm) above the contact point to provide support for the worker getting on and off.
3. Extension ladders must have the appropriate amount of overlap.

Extension Ladder Height	Required Overlap
<36 ft.	3 ft.

36-48 ft.	4 ft.
>48 ft.	5 ft.

Never stand/work higher than the 4<sup>th</sup> rung on an extension or straight ladder. A work platform should be erected.

4. Place the ladder on a solid, firm, flat surface. The feet of extension or stepladders must be level. Avoid ladder use on slippery surfaces.
5. A board may be necessary to ensure the ladder is level or to prevent it from sinking into soft ground.
6. Ladders must **NEVER** be placed on boxes, barrels, tables, roofs of vans or other unstable bases to obtain additional height.
7. Ensure the ladder is not placed in front of a door that opens towards the ladder unless the door is blocked, locked or guarded.
8. If a worker may be endangered by ground traffic there must be a guard in place and signage posted to direct people away from the area.
9. Keep the area around the base of the ladder uncluttered.
10. Before erecting a ladder check for over head hazards, particularly power lines.



11. The ladder must be erected at an angle of 75° from the horizontal, Use the “1 to 4” rule. Place the ladder 1 foot out from the base for every 4 feet in height.
12. Both railings of the top section of a straight ladder must be resting on a firm support.
13. Ladders must be raised and lowered by the user standing on the ground to ensure the locks are properly engaged.
14. Due to their design it is not recommended that extension ladders be separated to be used singly. However, if a ladder is disassembled ensure that the re-assembly of the ladder is properly carried out and the inter-locking brackets and guides are correctly engaged.
15. When using a ladder for access to high places securely "tie-off" the

- upper portion of the ladder to prevent it from slipping.
16. Before climbing a ladder inspect your footwear and the ladder rungs (or steps) for any slippery materials (grease, paint, ice etc.)
  17. Use extra caution when climbing a wet ladder.
  18. Do **NOT** use straight ladders or step-ladders in a horizontal position as a platform or scaffold, they are not designed for it.
  19. Obtain assistance when handling a heavy or long ladder.
  20. **NEVER** place a ladder against a window pane or sash. Fasten a board (do not use nails) across the top of the ladder to give a bearing surface at each side of the window.
  21. **NEVER** use ladders during strong winds or storms except in emergencies, and then only; when they are securely "tied-off".

### Climbing a Ladder

1. Always face the ladder when going up or down. Do not climb up the side.
2. Take only one (1) step/rung at a time.
3. Hold the side rails with both hands when climbing up or down a ladder. Do **NOT** hold onto the rungs when going up or down a ladder.
4. Use a three-point contact climbing method (two hands and one foot, one hand and two feet)
5. **NEVER** climb a ladder "one-handed" while carrying something in the other hand. Carry tools in a tool belt and use a hand line to raise or lower large objects, parts, tools, etc.
6. When working on ladders keep your body centered between the rails of the ladder and **NEVER** reach more than an arm's length to the side or attempt to reach too high as you may lose your balance.
7. **NEVER** stand on the top two (2) rungs of ladders and **NEVER** stand on the top step or platform of a ladder.
8. **NEVER** slide down the side rails of ladders.
9. **NEVER** transfer from one ladder to another, instead climb down to the ground then up the other ladder.



### Step Ladders

1. Ensure the stepladder is fully open and that the spreader bars are securely locked.
2. Check the stepladder stability before climbing.
3. Make sure that the stepladder is placed on firm and level ground.
4. If you need to reach a height in excess of twenty (20) feet, use a straight ladder or an extension ladder
5. **NEVER** "walk" a stepladder while standing on it.
6. **NEVER** use a stepladder as a straight ladder – always open the legs fully and lock the braces.
7. Do not use stepladders as a brace or support for a work platform or plank.
8. **NEVER** stand on or above the top two rungs of a ladder.
9. **NEVER** stand on the top of a stepladder.
10. **NEVER** stand on the “paint shelf” or bucket holder of a stepladder.

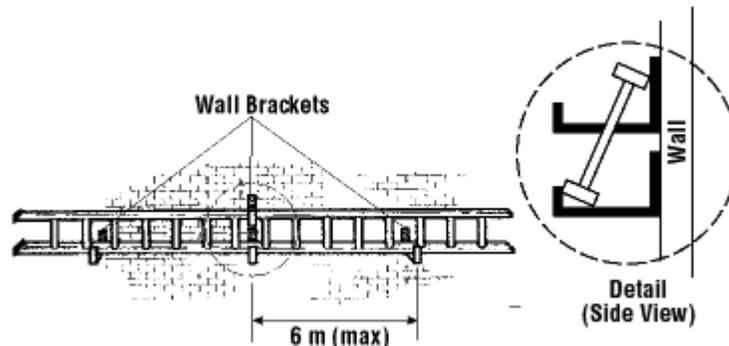
### Transporting Ladders

1. Transport ladders with the feet to the rear and the top of the ladder forwards. When coming around corners go slow as to avoid collision with others.
2. When you hand-carry a ladder, keep the front end elevated, especially around blind corners, in aisles, and through doorways.
3. Long ladders should be carried by two persons, one at each end and on opposite sides of the ladder.
4. When you transport a ladder in a truck or trailer, place it parallel to the bed for maximum support. Avoid tossing, throwing, or dropping a ladder in the bed.
5. If you transport a long ladder on a short truck bed over long distances, support the ladder so it will not sag or bend.
6. Drive slowly over rough terrain. Tie ladders down securely to eliminate nicking, gouging, chafing, and road shock; if side stakes are available, use them to prevent lateral swing.
7. The lockable steel ladder clamp offer better safety in travel, security whilst parked, and swiftness in clamping ladder (or similar loads such as pipes and planks) to roof racks.

\*\*\* The law requires that you have a red flag attached to your extension ladder when it extends 4 feet beyond the rear of the vehicle. \*\*\*

## **STORAGE**

1. Always store ladder in a covered, well ventilated area protected from the weather and away from too much dampness or heat.
2. **NEVER** hang a ladder vertically from a rung.
3. **NEVER** rest a ladder on its rungs. It should be placed on the side rails to avoid rung damage.
4. If possible, avoid storing ladders vertically because they may fall, instead store ladders horizontally- a rack or wall brackets are ideal.



## **Roles and Responsibilities**

### **Supervisor**

It is the responsibility of the Supervisor to ensure:

- All employees know, understand and comply with the safe work procedure.
- The safe work procedure is reviewed annually and amended, if required.
- Any changes that have been made to the safe work procedure must be immediately communicated to all employees. This includes a posted bulletin and verbal notification.
- Provide the employee with a verbal and visual demonstration of the step by step procedure.

### **Employee**

It is the responsibility of the Employee to:

- Read and understand the safe work procedure.
- Always comply with the safe work procedure.

### **Communication**

Written safe work procedures are located in Station One at Public Works. All procedures can also be found on the City of Campbell River's intranet under the Public Works Safe Work Procedures.

Visual and verbal instructions of the step by step procedure will be provided to the Employee by the Supervisor.

### **Training**

All employees will be required to read through the safe work procedure as part of their training. Each employee will be shown the step by step safe work procedure by the Supervisor.

### **Evaluation**

Safe work procedures will be reviewed annually to ensure all information is current and applicable.

### **Forms**

An "Out of Order" tag must be placed on all damaged or defective ladders.

### **Reference Materials**

Always reference the manufacturing safety labels found on ladders.