

# Landscaping and padmounted transformers

A GUIDE FOR PLANTING SHRUBS AROUND TRANSFORMERS



## About padmounted transformers

Padmounted transformers perform a necessary and valuable function. They do, however, present some landscaping challenges. This brochure will provide you with some guidelines and interesting design ideas to create both a pleasing visual effect, while still providing access for BC Hydro power line technicians to safely carry out their work.

Transformers are an important part of the supply chain that brings electrical energy to your home or business. Their function is to change (step down) high-voltage electricity to the lower voltage needed for the lights and appliances you use.

Padmounted transformers are usually green/yellow rectangular metal boxes/cabinets located next to sidewalks or roadways. Most units are about 0.6 m (2 feet) high and have one door. A few units are larger and have two sets of doors.

Buried beneath and connecting to the transformer are live electrical cables. Digging in the vicinity of the transformer is extremely dangerous. It can result in contact with live electrical cables, resulting in very serious injury. As well, digging could damage these cables and cause interruptions to electrical service.

### Be safe – call before you dig

If you're considering any work involving digging in the vicinity of a padmounted transformer, call BC One Call at 1 800 474 6886. BC One Call will notify member utilities, including BC Hydro, of your intention to dig in the area. Member utilities can tell you where their facilities, such as electrical cables, are located so that you can work safely.

There may also be a transformer ground wire surrounding the transformer at a distance of 0.3 m to 0.9 m (1 to 3 feet), and buried at a depth of 0.3 m. Though momentary contact with this wire is not a safety hazard, the wire does serve an important purpose and should not be moved or damaged.

### ENSURE EASY ACCESS FOR POWER LINE TECHNICIANS

When there is a power outage or emergency, or regular maintenance is required, power line technicians need fast and easy access to the transformer. To work safely, the technicians need a minimum of 3.0 m (9.84 feet) clearance in front of the transformer doors, so it's critical that you don't put up a fence, wall or other structure that will restrict safe access to the unit. Planting trees or shrubs too close to the unit can pose a significant access problem as well as a potential safety hazard, so please be sure to follow the clearance guidelines on the following pages.

For more information, call BC Hydro at  
1 800 BCHYDRO (1 800 224 9376)

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Power smart

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### Remember, safety first

Padmounted transformers contain high-voltage electrical equipment, and children should never play on or near them. Padlocks and special bolts are placed on transformers to keep the doors and covers shut.

If you notice that a transformer is damaged in any way, or if it appears unlocked or open, please call BC Hydro immediately at 1 800 BCHYDRO, or \*HYDRO on your cell, and keep yourself and anyone else back at least 10 m (33 feet). Please provide the identification number (on the front of the transformer) to BC Hydro when you call.

## PLANNING YOUR LANDSCAPING

When planning your landscaping it's important to select shrubs for around the padmounted transformer that can be easily maintained. They should also be inspected and trimmed back annually to maintain the necessary clearances. Junipers, azaleas, viburnum, dwarf rhododendrons and mugho pines are excellent choices. Evergreen shrubs are often recommended and used because they provide year-round screening. Bushes that grow to a maximum height of 2 to 3 m (7 to 9 feet) are ideal, and selecting slow-growing species also means less maintenance.

Be sure to consider the root characteristics of the plants you choose. It's important that root systems don't interfere with the ground wire and other buried cables. Your nursery will be able to advise you on what plants to avoid.

Planting plans A and B (at right) offer suggested landscaping designs, as well as plants that work well around padmounted transformers and create a pleasing visual effect while maintaining safe and easy access for workers.



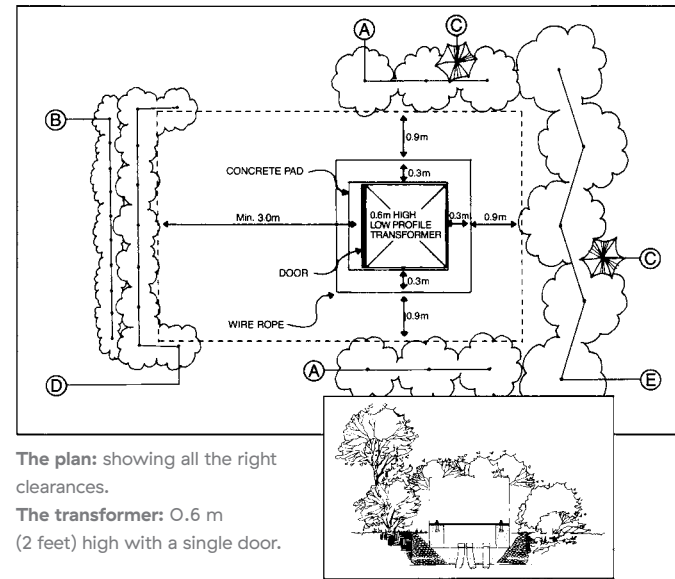
An example of plants and shrubs that have been planted too close to transformer unit.



A good example of how plants and shrubs should be planted in the vicinity of a transformer unit.

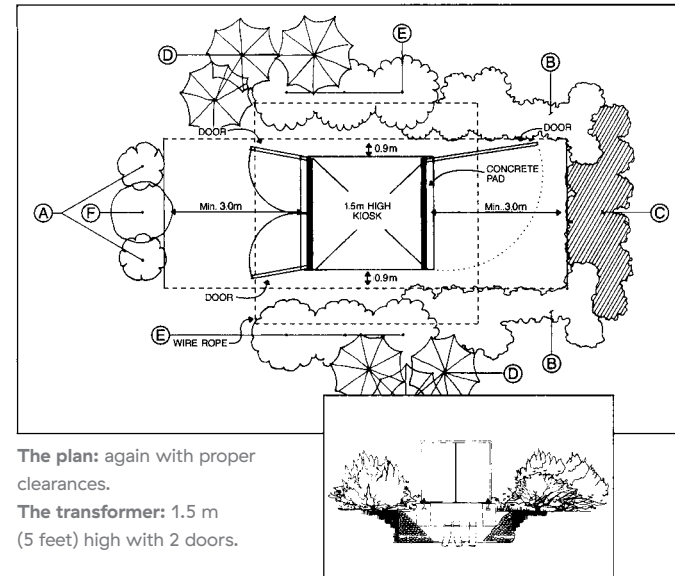
## Tips for landscaping around padmounted transformers

### EXAMPLE — PLANTING PLAN A



Sym.	Qty.	Botanical name	Common name	Spacing
(A)	3	Azalea "Hino White"	Azalea white flowered	80 cm
(A)	3	Azalea "Hino Crimson"	Azalea red flowered	80 cm
(B)	10	Dianthus Varieties	Pinks	80 cm
(C)	2	Juniperis Squamata "Blue Star"	"Blue Star" Juniper	80 cm
(D)	3	Kalmia Latifolia (red)	Mountain Laurel red flowered	80 cm
(D)	2	Kalmia Latifolia (white)	Mountain Laurel white flowered	80 cm
(E)	9	Lithodora Diffusa "Grace Ward"	Lithospermum	80 cm

### EXAMPLE — PLANTING PLAN B



Sym.	Qty.	Botanical name	Common name	Spacing
(A)	2	Daphne Cneorum	Rock Daphne	60 cm
(B)	9	Erica Carnea	Winter Heather	50 cm
(B)	9	Calluna Vulgaris	Summer Heather	60 cm
(C)	9	Pachysandra Terminalis	Japanese Spurge	30 cm
(D)	6	Pinus Mugho	Mugho Pine	1 cm
(E)	6	Potentilla Fruticosa	Cinquefoil	80 cm
(F)	1	Viburnum Davidii	Viburnum	80 cm

### CHECKLIST FOR SAFETY AND SUCCESS

#### Before digging

Call BC One Call at 1 800 474 6886, for buried utility information.

#### Before planting

- Measure the transformer, taking particular note of the height. This information will help you and your nursery select the appropriate plants.
- Draw a planting plan showing the location of plants, honouring required clearances, and with none planted directly in front of the transformer door.
- Take your plan with you to your local nursery. Experts there can provide advice on plant selection, planting procedures and maintenance for species that grow best in your climate. A photograph of the transformer and the surrounding area may also help nursery staff to visualize the setting.

#### When planting

- The duct-enclosed cables are high-voltage and are buried about 0.9 m (3 feet) below grade. Call before you dig.
- A ground wire surrounds the transformer at a distance between 0.3 and 0.9 m (1 and 3 feet) from the pad, and is buried about 0.3 m (1 foot) below grade. This wire is not a safety hazard, but should not be moved or broken.
- Proper planting and maintenance procedures available at your local nursery will help to ensure that your plants remain healthy.
- Plants must be inspected and trimmed back annually to maintain required clearances.