



# The Right Tree in the Right Place

The underground distribution system

## Clearance requirements

Practical advice and design ideas for landscaping near pad-mounted transformers.



People are more conscious than ever of their living environment and put increasing emphasis on the quality of that environment. In response, more and more municipalities are requiring that new residential developments put power lines underground. You are fortunate to live in a neighborhood that is part of the trend toward a wirefree environment.

In neighborhoods with an underground distribution system, cables are buried in underground conduits, while the equipment needed to operate the system can be located above ground. The location of equipment and conduits is governed by strict criteria.

Homeowners with a pad-mounted transformer or conduits on or in front of their lot must respect clearance requirements that give Hydro-Québec easy access to the equipment. It is absolutely essential to comply with these clearances so that power system operations can be conducted safely, helping to reduce delays during outages.

There are many benefits to living in a neighborhood with an underground distribution system:

- unobstructed views
- more space for landscaping
- fewer limitations on locating your patio, pool or garden shed
- lower risk of power outages due to high winds, or fallen branches or trees
- possible increase in the resale value of your home



Hydro-Québec would like to provide you with some useful information on clearance requirements and landscaping principles that can help ensure that a pad-mounted transformer is successfully integrated with your property.

### Did you know?

More than 40% of power outages are caused by fallen branches or trees near overhead distribution lines—and in certain areas, the percentage is much higher. An underground distribution system can help prevent these outages.

### Pad-mounted transformer: A very safe device

These devices have a metal enclosure that is designed to provide adequate protection with regard to the live electrical equipment inside. A bolted and padlocked door prevents access to this equipment. The enclosure is also equipped with a grounding set that protects the public and Hydro-Québec employees who maintain or repair the equipment.



## Be careful!

If you do not respect **clearance requirements** and **recommended planting distances**, your landscaping could be damaged during routine system maintenance or when repairs are made following an outage.

# THREE IMPORTANT STEPS TO FOLLOW

## Step 1

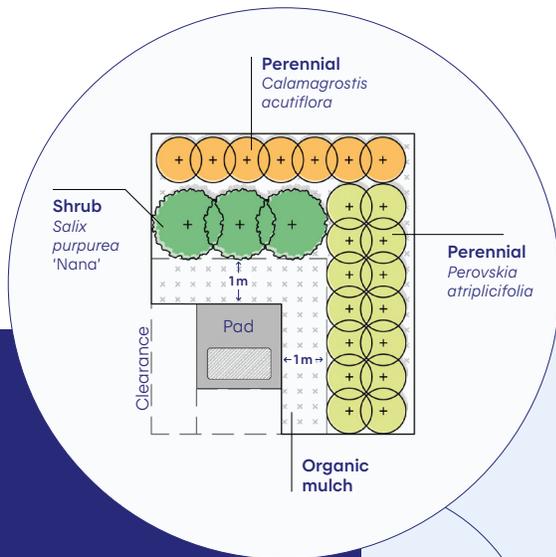
### Always find out before you dig

Regardless of why you are digging, you must **always call Info-Excavation**, a free information service on underground infrastructures. The call center is able to answer location requests all over Québec. By finding out before you start, you can factor in this information when planning your landscape design.

## Step 2

### Select your plants carefully and respect the recommended planting distances

Plan your landscaping carefully. Successful landscaping requires careful long-term planning and planting the right tree in the right place. Always keep in mind that **equipment must be accessible to Hydro-Québec employees at all times** so that they are always able to ensure quality customer service. This applies to pad-mounted transformers and other aboveground and buried equipment.



## “Contemporary” landscaping

“Contemporary” landscaping is characterized by its structured and organized appearance. The chosen plants are arranged in straight rows with borders. Plants that tolerate pruning are ideal because they allow for a homogenous appearance. The colors and textures of the plants are diversified to create contrasts in volume, texture and color.

## It's up to you!

Here are some landscaping examples to help you meet clearance requirements and integrate a pad-mounted transformer into your property.



A clearance of one metre is required around the sides and at the back, and the front must be completely unobstructed.

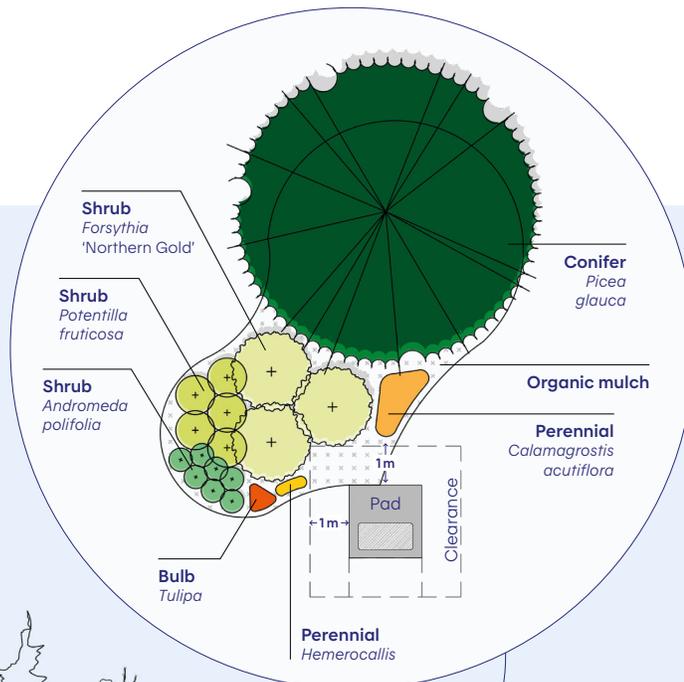
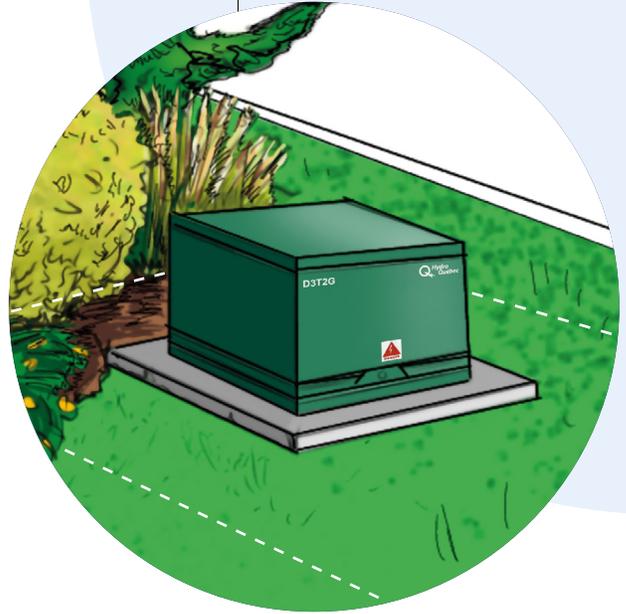
## Planting spacing

### Aboveground equipment

For pad-mounted transformers, nothing must be placed in front of the doors and a completely unobstructed space of one metre must be left around the sides and back. The concrete base must be unobstructed, free of any earth, mulch or branches in order to prevent corrosion. Keep in mind that your plants will increase in size until they reach maturity. Take this into account when planting, to maintain clearance requirements.

### Buried equipment

When planting, you must respect a minimum distance of 1.5 metres between the center of a tree and the center of an underground conduit.



## “Year-round” landscaping

“Year-round” landscaping is characterized by the diversity of its aesthetics throughout the seasons. Flowers, fruit, colors and textures change from one season to the next, creating an appealing visual throughout the year. Plants with a variety of flowering periods and colors help maintain the aesthetic appeal during the summer. Evergreen foliage plants brighten up the winter months and bulbs can be planted alongside perennials to create flower beds that are in bloom from early spring to fall.



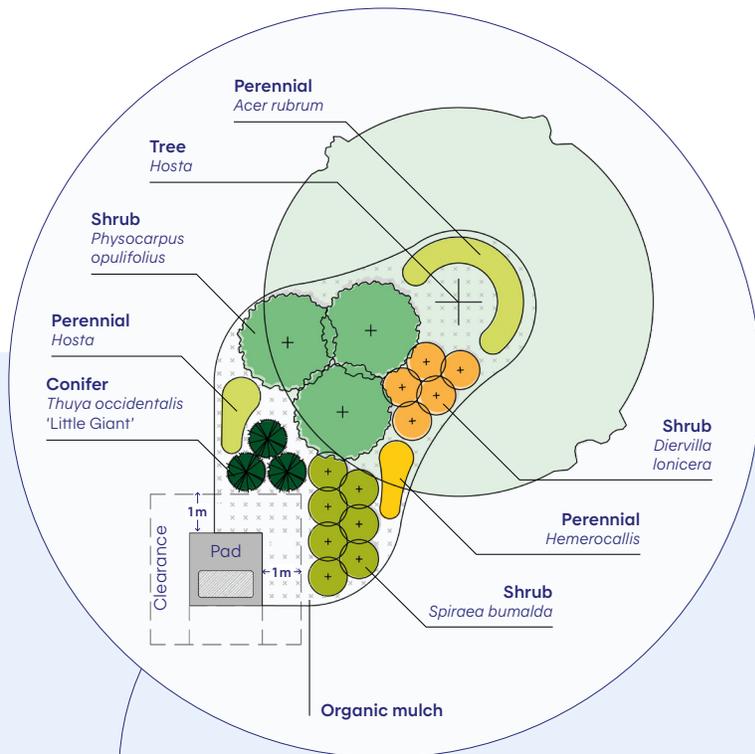
# THREE IMPORTANT STEPS TO FOLLOW

## Step 3

### Regularly maintain your plantings

A lot adorned with mature trees and shrubs increases the value of your home. To ensure that your plantings flourish and reach full maturity, please look after them regularly and respect clearance requirements. If employees responsible for maintaining and repairing the distribution system cannot access the equipment, Hydro-Québec will have no choice but to prune your shrubs and trees itself or sometimes even remove plantings that do not comply with requirements.

It's your responsibility to make sure that the pad-mounted transformer on your property is always accessible. When necessary, you must prune or remove any foliage, branches or plants that encroach on the required clearance, meaning that you must leave a completely unobstructed space of one metre around the sides and back of pad-mounted transformers.



### “Maintenance-free” landscaping

“Maintenance-free” landscaping involves selecting plants that require little upkeep. The varieties chosen can tolerate diverse conditions (sun exposure, humidity, type of soil, etc.). They are also able to resist pollution, winter conditions and harmful insects and require little in terms of watering, soil amendments, pruning and winter protection.

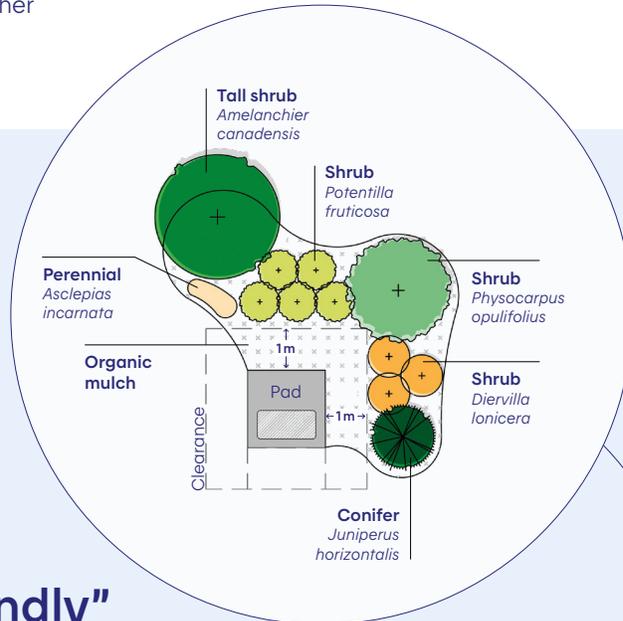


## Some helpful tips

- Choose a wide variety of plants for beautiful landscaping in all seasons.
- Plantings should be big enough to compete visually with the pad-mounted transformer.
- In your design, vary the height of plants at maturity to give a feeling of perspective, which will serve to enlarge the space visually.
- Don't forget—trees and shrubs grow! You must leave them enough space to do so without interfering with the distribution system.
- To help the pad-mounted transformer blend into your landscaping, use plants with foliage or flowers in the same tones as the transformer, planting them on its periphery or in the background.
- Avoid a design consisting of a single, horseshoe-shaped bed around the transformer, which will draw the eye to the device rather than diverting attention.

## Pollinators

Hydro-Québec recognizes the important role pollinators play in a number of ecological services. When planning your landscaping, why not incorporate native plants that are good sources of pollen and nectar? Here are some pollinator-friendly species available at your local nursery: milkweed, aster, sneezeweed, wild bergamot, common elderberry and meadow-parsnip.



## “Environmentally friendly” landscaping

“Environmentally friendly” landscaping relies on a diversified selection of plants. A combination of trees, shrubs and herbaceous plants creates a sustainable environment that supports biodiversity. Flowering and fruit-bearing plants are ideal for birds and pollinators. Native plant species are well adapted to local conditions and require little upkeep, thereby minimizing the environmental footprint.





### During winter

Remember to keep the area around a pad-mounted transformer free of excess snow so that it's accessible to Hydro-Québec employees to make repairs during an outage. It is also a good idea to mark the transformer with a stake.

#### Hydro-Québec

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