

rethink/ PLACES

Go Green with a Green Wall



A green wall is a vertical garden. Especially on sites without room for large shade trees or traditional gardens, they can offer a beautiful and innovative urban option for shading and cooling buildings.

Somewhat like a shade tree, a living wall system can shade the sides of a home or other building that get direct sun. In this way, it can reduce energy use and costs -- especially when installed on an east or west facing exterior wall.

Living walls typically require installation on a manufactured system. The plants receive water and nutrients from the vertical support system, instead of the ground. Some systems allow intricate garden designs -- with vines, flowering perennials, foliage plants, succulents, and even food production.

However, careful plant selection, and a system that delivers sufficient water, is critical for our hot Texas climate.

Another approach is a "green façade": A structure installed on the wall, or the wall itself, supports climbing plants that are rooted in the ground.

What is a green wall?

A "green wall" or "living wall" is a self-sufficient vertical garden attached to a building. A green wall can be installed on both exterior and interior walls.

BENEFITS: EXTERIORS

- Can reduce energy use to cool the building by up to 20%
- Insulates building in winter as well
- Dampens sound
- Adds plants that cool air temperatures through evapotranspiration.
- Provides greenery, natural beauty, and wildlife habitat in the city
- Creates a living work of art, enhances well-being
- Protects the building and enhances home value
- Can earn LEED credits

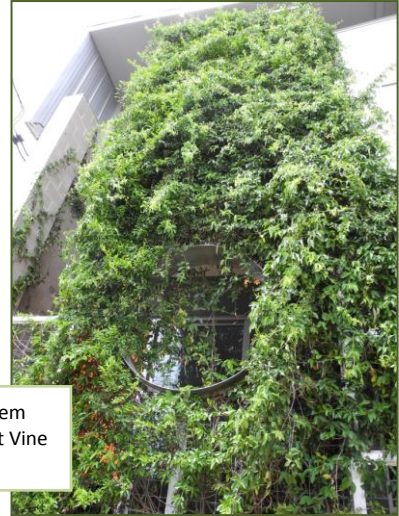
CHOOSING A GREEN WALL

Expect to provide care and maintenance for up to two to three years after installation, until the plants become established and mature. They will continue to require watering and some care.

Living Wall:

A variety of manufactured systems are available. Typically, prefabricated components are purchased and then assembled on site. Visit manufacturers' websites to research different green wall systems and develop a realistic budget.

A system may be pre-planted before installation. It may include plastic containers, geotextiles, irrigation systems, growing medium and vegetation.



Modular trellis system
covered with Trumpet Vine
- Austin, Texas

Consider both the costs of initial installation and ongoing maintenance. This type of green wall is typically more expensive than a green facade.

Green Facade:

These can work well for many types of walls, but also require careful research and installation. They must include a base material, for the plants to take root in, and require structural integrity to support the weight of the plants as they grow. Some wall surfaces can directly support plants (e.g. ivy growing over brick walls). Options for systems include:

- **Modular Trellis System:** A lightweight trellis system can be installed either on a wall mount or as a free standing application. A wood trellis is affordable, but will not last as long as metal.
- **Wire-rope and Cable Net Systems:** These are comprised of high tensile steel cables, wire trellises, anchors, and spacers. These can be attached directly using many points to distribute weight load, or hung from very strong anchor points.



Valuable shade can be created simply by planting trees, shrubs, and vines so that they shade and cover a wall that gets direct sun.

On this Austin home, an east-facing facade is covered in mature Fig Vine.

Resources

Green Roofs for Healthy Cities

<http://www.greenroofs.org/>

GROWERS (a local Austin interest group)

<http://www.growersaustin.com/>