



Landscape Design Guidelines

SOLTERRA

European Hill town

Solterra is located against the backdrop of bountiful views of the foothills, Red Rocks Park and protected open space. The European hilltown architecture of Solterra has a strong theme that will be reinforced through landscaping and outdoor spaces.

The historic landscapes of European hilltown communities are well known and loved throughout the world. These are communities where nature and culture meet on amicable terms and are very interconnected.

In this environment, the architecture and landscaping are married to the topography of the hillsides. Bringing the 'outdoors in' is a recurrent theme in hilltown communities. Views from windows are framed to look out into a courtyard filled with large potted plants or a pergola dripping with grape vines.

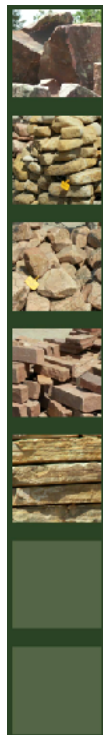
Although the landscaping offers aesthetic sensibilities, it is also very practical. Vegetable, herb and flower gardens are prevalent. Plants are used in masses to soften architecture and to delineate spaces. Wrought iron gates and fencing, stone steps and inviting paths provide access to gardens and outdoor retreats.

The use of natural materials such as stone and wooden beamed patio structures will connect the architecture to the land. The correct selection of plants, hardscape materials and patio treatments will complement the individual home and reinforce the overall community theme.

Landscaping of the individual lots in Solterra should reinforce the landscape design of the public spaces. Wrought iron fencing, cast stone pillars, stone retaining walls, plant massing with seasonal color and texture are the predominate elements of design.

Paths, Steps, and Walls

Stone is an important thematic element at Solterra. Stone walls create elevation change adding interest and character to the landscape.



Pa Specimen boulders can be used as focal points. It is best to bury 1/4 to 1/2 of the stone to give the appearance that the stone has always been there. Odd numbers and different shapes are best if using boulders in groups.

Sp Stone walls are ideal for terracing, retaining, defining planting beds and turf areas. All retaining walls, cheek walls, dry stack walls shall be made of natural stone and/or an approved alternative. Approved alternatives may include a faux stone veneer or could be an extension of the materials used on the home such as brick or stucco, if directly connected to the architecture of the home. Preference shall be given to stone indigenous to the surrounding environment (sandstone).

Wall stone can come in a variety of forms and colors. It can be angular or rounded, cut for veneer applications, or strip, which is often used for dry stack. It is highly recommended that stone walls be installed by a skilled stone mason to avoid a disorganized appearance. Any retaining walls over 30" must be designed by a professional engineer and approved by the City of Lakewood engineer prior to construction.

All walls shall be outside of all easements, rights-of-way, sight line triangles at intersections and placed a minimum of two feet past the

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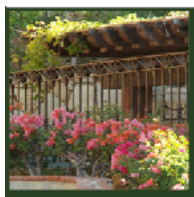
back of a public walk. Each retaining wall shall be separated by a minimum horizontal distance that is equal to the height of the tallest wall. All terraces between walls shall be landscaped.

All wall stone must be approved by the DRB prior to installation.

Steps highlight topographical changes. The tread and riser should complement the abutting wall. Attractive stone steps may consist of flagstone slabs for the tread portion and strip stone for the riser.

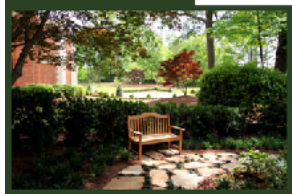
Consider discrete stone paths, planted with ground covers, to the backyard or through gardens. A wide expanse of concrete or gravel is unacceptable.

Patios, Courtyards, and Outdoor Spaces

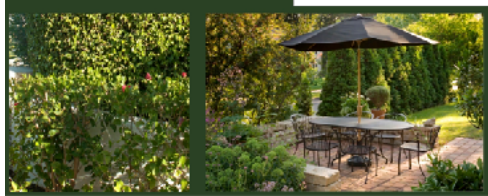


Outdoor living and dining al fresco are predominate in European Hill-town Communities and is conducive to Colorado's climate. Well-designed spaces that echo the architectural style of the home add a functional and alluring element to outdoor living.

The use of pergolas or arbors for outdoor spaces is encouraged and central to European Hill-town Architecture. Pergolas are shaded walkways, passageways or sitting areas of support columns that that usually support cross-beams and a sturdy open lattice. Arbors are shaded places for sitting. Both are often covered with vines and can be free standing or connected to the home.



Solid roofs can be used if the materials are extensions of the home's architecture. Support columns and beams for pergolas and arbors should appear substantial and scaled to the architecture.



Pavers, stone or lawn on the ground plane for patios, arbors or courtyards are preferred materials over concrete or decking.

Break up large expanses of hardscape with specimen plantings, old world artifacts such as, antique garden planters, stone slab benches or water features used as focal points.

Fences, Gates, and Pillars

Fences or walls internal to the property must be an extension of the architecture and enclose a minimal area appropriate to the intended use.

All fencing shall be wrought iron or an approved alternate, with a 6' maximum height.

Stone pillars at appropriate frequency and scale are desirable to break up long runs of fencing. Pillars should be used at gates, fence and wall corners and as accents to support lights and planters.

Living fences such as hedges or raised planters are also desirable and typical to a hilltown theme. Non-living fencing will be allowed only adjacent to hot tubs.

Streetscape and Entryways

A smooth transition to adjacent properties is paramount to the continuity of the community and the streetscape. Front yard plantings should frame the house, the entryway and control views of side yards between homes. The scale of planting, relative to the house and neighboring architecture must be considered. Plant massings are essential to soften architecture and elements such as garages, front entry walks and foundations. Layering of plants using plants of varying sizes, color and texture creates visual depth and interest.

Lot edges in the front of the home should transition smoothly with adjacent lots without emphasizing property lines. A cohesive, well-coordinated relationship between neighboring lots is essential whether it consists of planting beds or turf. Outdoor living spaces, retaining walls and berms should gracefully extended from the architecture in both form and materials.

The developer shall provide street trees along local streets. Homeowners shall maintain all trees and landscaping from the back of curb to the rear lot line.

Consider the use of large Old World looking pots for additional color and interest. Window boxes for displays of annual color can be a strong thematic element enhancing the architecture of the home.

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Irrigation

All landscapes shall be watered with an automatic underground irrigation system. Plants should be zoned (grouped) in areas with similar water requirements and irrigated appropriately. Lawn areas (high water use) should be minimized and on a separate zone from shrubs or perennials. Each zone shall have plant materials with similar water requirements. Avoid overspray onto impermeable areas.

Consider the use of subsurface drip irrigation for turf areas and planting beds where possible. Subsurface irrigation is installed 4" underground and delivers water slowly to plant root zones. The water radiates outward from its source point, creating an overlapping wetting pattern beneath the ground. This technology, if installed and maintained correctly, decreases water use in the landscape.

Property owners shall comply with the City of Lakewood's irrigation schedule and regulations.

Soil Preparation, Planting Beds, Mulches



For proper plant growth, Colorado soils need amending with organic material. A minimum of four cubic yards of organic material shall be added to topsoil per 1000 square feet of planting area. Organic material shall be aged compost; wood humus from soft, non-toxic trees; and/or sphagnum peat moss (excluding that of Colorado origin). Proper amendments will improve drainage and, as a result, conserve water. Plants will flourish and live longer, healthier lives. A soil analysis should be performed prior to planting for proper micronutrient recommendations.



Planting beds are essential to good design and shall be densely planted. Beds must be contiguous to the architecture and not positioned in lawn areas with no apparent relationship to the home. Use plants to create depth, interest and to screen foundations and outside utilities. Piping downspouts by extending them underground to a low point in the yard is not recommended.



Mulching planting beds is necessary in Colorado to conserve moisture and to discourage weeds. Permeable areas, other than turf areas, should have a minimum of 3" of mulch, and should be rock or organic mulch meeting the following criteria:



- Shredded, fibrous material capable of "knitting" together to form a mat that is wind and erosion resistant. Generally, the shredded mulch or peelings are 3" in length on average. Examples include shredded cedar mulch, shredded redwood mulch, or pole peelings.



- Bark and wood chip mulches are not allowed. Weed barrier is not required. If used, plastic weed barrier is not permitted. Except for drainage areas, only 1 1/2" brown, tan, or gray will be an acceptable rock mulch. Mulches with artificial coloring will not be allowed.

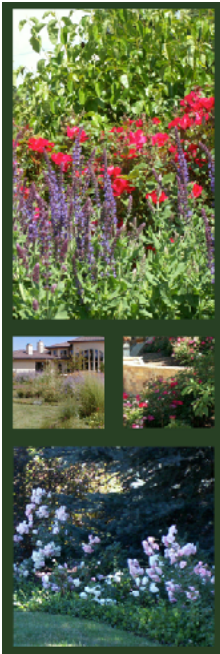
Plant Massing and Layering

A variety of interesting and colorful plants are adaptable to Colorado's arid climate. Unfortunately, a common misinterpretation of 'xeriscape' or water conserving landscapes consists of excessive amounts of inert ground-cover with sparse plantings. To avoid this look and to create a strong contiguous theme, the repetition of preferred plants and high-density plantings will be essential. Massing involves the use of many plants closely planted, eventually eliminating views of the ground plane. The layering of plants not only creates a transition from one space to another but also provides a variety of seasonal interest, color and depth to the landscape. For instance, using taller shrubs in the background, shorter shrubs in the middle ground and perennials in the foreground is a method of successful layering.

The pictures in this document portray the intended plant theme with a more complete description of individual varieties in Appendix A:

- Vines on exterior walls and garden structures
- Shrub Roses for bursts of color in the warmer months
- Serviceberry as the predominate ornamental tree/large shrub
- Ornamental Grasses to provide accents for year around interest

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- Narrow Vertical Trees reinforcing European hilltown themes
- Hedges for screening and privacy
- Turf Grass for streetscape continuity, blending property lines and high use areas - maximum turf area of 45% excluding area between sidewalk and curb
- Massing of perennials for seasonal color

Edging and Drainage Swales

The separation of planting beds from lawn areas requires edging. The most interesting way to define separation is to construct a grade change with small retaining walls. Trench edging (to a depth of 6" and filled with mulch) is also effective. Poly board or wood composite edging is also effective if flush with the grade

Using cobblestone rounds for drainage swales is an effective method of directing drainage. Only 4" to 6" natural cobblestone shall be used for drainage areas. Appropriate plant massing within the swales will soften the harsh appearance of rock. Swales often offer an opportunity to use plants requiring more water if the swales retain moisture.

Exterior Lighting

Exterior lighting is encouraged to illuminate landscaping, walks and streets with ambient light. Lighting should be minimal and subdued. Low voltage lighting is recommended. Eye-mounted security lighting is prohibited.

Up-lighting trees and small areas of the architectural façade can add interest and improve security concerns. Path lighting should be minimal to avoid a 'runway' effect. Entry or doorway lighting should not be intrusive to neighboring properties.

The use of European style lantern fixtures with low wattage bulbs (15 watt or less) are recommended.

Extraneous Structures and Utilities

Consideration of street and neighboring views is essential when planning for extraneous structures or utilities in the landscape.

- Service areas shall be screened and integrated into the architectural design. Freestanding accessory buildings will not be allowed.
- Dog runs and houses must be approved by the DRB as to location, screening and proximity to adjacent neighbors. Invisible dog fences are preferred over dog runs.
- Hot tubs should be fully screened from adjacent properties. Non-living fencing up to 6' in height may be approved by the DRB, if it is clearly for the purpose of screening hot tubs and if it is well integrated into the overall design of the landscape.
- Play equipment and trampolines must be approved by the DRB. Placement of play equipment and trampolines shall be shown on the plans. All such equipment shall be placed to the rear of the lot and not be obtrusive to neighboring homes.
- Swimming pools shall comply with all applicable code requirements for safety and construction. No above ground pools are allowed.
- Utilities and air conditioning equipment installed in the side yard shall be screened so as not to be visible from neighboring or street views.

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Thematic Plants

All Landscape Plans must incorporate some or most of these theme plants.

The listed plants are not inclusive of all plants that can be selected; however, their use is highly recommended. Since Solterra is located on south and west facing slopes, large deciduous and evergreen trees may be used for shade and winter protection, but community views will be considered by the DRB during plan review.

Vines

Vines offer vertical interest to architecture and shade for outdoor spaces. In general, sun-loving vines have bursts of color while most shade-loving vines do not bloom.

- Clematis (many varieties and colors) – sun, good companion for climbing roses
- English Ivy – self-clinging vine, great for shady exposures, evergreen
- Boston Ivy – self-clinging vine, vibrant red fall color
- Wisteria – violet blue, plume like clusters
- Trumpet Vine – orange trumpet shaped flowers
- Climbing Roses – Blaze (red), Don Juan (red), William Baffin (pink)

Shrub Roses

Shrub roses are tough, low maintenance plants that provide weeks of color. They can be used as specimens especially if intermingled with perennials, planted in masses or used as informal hedges. Many varieties exist, with new ones coming on the market every year. Some of the favorite long blooming varieties include:

- Carefree Delight – 3', pink
- Carefree Sunshine – 3', yellow
- Adelaide Hoodless – 5', red
- Golden Wings – 5', yellow
- Knock-out – 3', red or pink
- Meidiland Varieties – 2'-4', various colors
- Sea Foam – 3', white

Serviceberries

Serviceberries range from 6- ' 15' depending on the variety. They are most commonly found in multi- stemmed clumps. They offer white blooms in the spring, leaves and berries loved by birds in the summer, great fall color and nice winter structure. The hybrids (Regent, Autumn Brilliance, Robin Hill) are better looking than the native varieties

Ornamental Grasses

Ornamental grasses add year around interest. They generally produce interesting seed heads and if left uncut until early spring, can look quite striking in the winter. Grasses are often selected based on height, fall color and overall effect. Most grasses are more effective if planted in masses or drifts

- Big Blue Stem – 4-6', great fall color
- 'Karl Foerster' Feather Reed Grass – 4-5', very upright
- Blue Avena Grass – 2'-3', bluish blades with arching form
- Miscanthus Grass (varieties) – several varieties with different attributes, most are 4' – 6'
- 'Hameln' Pennisetum Grass – 1'-2', dense mounded tuft with buff colored seed head.
- Switchgrass (varieties) – 3'-4', most varieties are upright clumps with panicles of airy seed heads.

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Narrow Trees

Narrow trees are commonly used in hilltown communities. The following are adaptable to Colorado's climate:

- *Carpinus Betulus Fatigiata* (Pyramidal European Hornbeam) – 30' ht, 15' spread
- *Quercus 'Crimson Spire'* (Columnar Oak) – 50' ht, 15'-20' spread
- *Abies Concolor* (White Fir) – 40'-60' ht, 25' spread, evergreen
- *Juniperus 'Skyrocket'* (Skyrocket Juniper) – 15'-20' ht, 3' spread, evergreen

Hedges

Hedges can be used to define outdoor spaces or to screen undesirable views.

- *Ligustrum Lodense* (Lodense Privet) – 3' ht, 3' spread, dense, semi-evergreen
- *Syringa Meyeri* (Dwarf Korean Lilac) – 5' ht, 5' spread, prolific spring bloomer
- *Euonymus Alata 'Compacta'* (Dwarf Burning Bush) – 5' ht, 4' spread, intense red fall color
- *Peking Cotoneaster* – 10' ht, 4' spread, upright, fall color
- *Rhamnus frangula* (Columnar Buckthorn) – 10' ht, 3' spread, plant closely for hedge effect
- Shrub Roses (listed above)

Perennials and Groundcovers

Many perennials and groundcovers are hardy in Colorado. The following list represents a few that offer long bloom periods and a good mix of spring, summer, and fall color. Perennials have more impact when planted in large groups using several of each variety and several varieties for constant seasonal color.

- *Achillea 'Coronation Gold'* – yellow, spring-summer
- *Agastache* – many varieties and colors, summer-fall
- *Aster* – many varieties and colors, summer-fall
- *Centranthus* – many varieties, red or white, summer
- *Coreopsis* – many varieties, mostly yellow, summer
- *Diascia 'Coral Canyon'* – pink, spring-summer
- *Echinacea* – several varieties, lavender or white, summer
- *Gaura* – several varieties – good companion plant for shrub roses, summer
- *Lamium* – great groundcover for shade
- *Lavender* – many varieties, good companion plant for shrub roses
- *Penstemon* – many varieties and colors, spring-summer
- *Rudbeckia 'Goldsturm'* – yellow, summer- fall
- *Salvia* – many varieties and colors, summer
- *Thyme* – many varieties and color, great groundcover for stepping stone paths
- *Veronica* – many groundcover varieties

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Converted to MS Word Sept 23, 2015 with only grammatical changes & corrections to text and removal of pictures. Edited Dec 2018, Apr 2019, Sept 2019 and Jan 2020 to clarify.