



CITY
OF
BELLFLOWER

PARKWAY
DESIGN
GUIDE



PREFACE

WHY CONVERT?

The City of Bellflower, in an effort to utilize water efficient strategies, has established guidelines for converting water demanding turf into water efficient landscaping. The following guidelines detail the City's requirements for converting City parkway (the landscaped area between the curb and the sidewalk) and the **no fee** permit process for the conversion.

By converting your parkway, you will not only assist our City in preserving one of its most precious commodities, you will save money as well!

WATER CONSERVATION FACTS:

Did you know that up to 60% of the water used in the summer is for your lawn?

- ❖ Water the lawn and garden at dawn when the day is cool; watering during the heat of the day can account for up to 60% evaporation loss.
- ❖ Mulch the garden to retain moisture in the soil.
- ❖ Use a bucket of suds to wash the car and only rinse with the hose using a nozzle.
- ❖ Sweep sidewalks and driveways instead of hosing them.

STORMWATER FACTS:

Did you know runoff from sprinklers or hoses can carry contaminants such as litter, animal waste, automobile fluids, fertilizers and pesticides into the storm drain and pollute rivers, channels and the ocean?

- ❖ Rain gutters should be directed to landscaped areas rather than concrete areas.
- ❖ Planting vegetation in parkways captures pollutants and sediment.
- ❖ Captured rainwater can be reused for irrigation.
- ❖ Efficient irrigation systems, such as drip irrigation, reduce the risk of overspray which carries pollutants into our waterways.
- ❖ Increasing the amount of landscaped areas and reducing concrete areas will assist with the reduction of water going into the gutter.

SOME OTHER FACTS:

- ❖ Gasoline-powered landscape equipment (mowers, trimmers, blowers, chainsaws) account for over 5% of our urban air pollution.
- ❖ Residential application of pesticides is typically at a rate of 20 times that of farmers per acre which has many untended results.
- ❖ Yard waste (mostly grass clippings) comprises 20% of municipal solid waste collected and most still ends up in landfills.
- ❖ Landscaping accounts for more than half the water Californians use at home.
- ❖ Water your lawn only when it needs it. If you step on the grass and it springs back up when you move, it doesn't need water. If it stays flat, it does need water.
- ❖ If you water your grass and trees more heavily, but less often, this saves water and builds stronger roots.
- ❖ Weather based irrigation controllers that use weather data to control watering will prevent over irrigation and runoff from your property.

WHY ARE PARKWAYS IMPORTANT?

The parkway is the strip of land between the street and the walkway. The parkway and walkway together make up the sidewalk, which is part of the public right-of-way. Street trees are planted in the parkway and are the most important plants in the parkway.

Parkways are important to individual property owners and the City as a whole for the following reasons:

- Parkway provide soil volume that street trees need to grow into healthy, mature trees that provide shade, collect stormwater, consume carbon and provide other environmental and health benefits.
- Parkway can collect stormwater and irrigation runoff and return it to the groundwater table.
- Parkway provide a buffer between pedestrians on the walkway and cars in the street.
- Parkway improve the curb appeal of your home, potentially increasing its value.
- Parkway enhance the visual quality of the city.

In Bellflower, the adjacent property owner is responsible for maintaining all of the parkway except the street trees, which are maintained by the City.

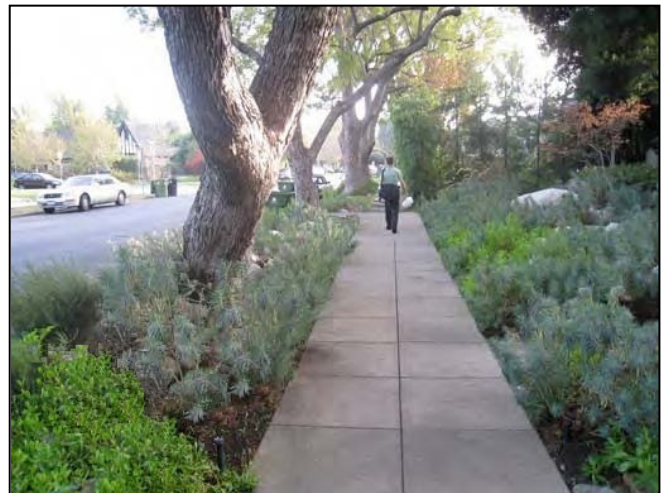
Street trees can only be planted, trimmed, and removed by the City and not by private property owners.

Parkways can be designed in a variety of ways, depending on the individual property owner’s design objectives and commitment to maintenance. However, all parkways should require relatively little supplemental water, little mowing and little fertilizing to reduce their carbon footprint. In particular, conventional grass parkways that require high levels of supplemental water and regular mowing and fertilizing should be avoided. Bellflower property owners are encouraged to convert their conventional grass parkways (and front yards) into drought-tolerant, sustainable parkways (and front yards). This brief document provides guidance for making that transition.



PARKWAY	WALKWAY	LANDSCAPED
PUBLIC RIGHT-OF-WAY		PRIVATE PROPERTY

Typical residential parkway of the past, based on those on the East Coast and Midwest where supplemental irrigation typically is not required.



PARKWAY	WALKWAY	LAND-SCAPED
PUBLIC RIGHT-OF-WAY		PRIVATE PROPERTY

In Southern California, we need to reduce the use turf grass to reduce water use and the greenhouse gases generated by lawn mowers. The parkway of the future should be drought-tolerant, collect runoff, and require minimal gas or electric powered maintenance.

To reduce water use and carbon emissions and provide storm and irrigation water infiltration, soil volume for street trees, a buffer between pedestrians and the street, pedestrian access between the street and walkway, visibility of both motorists and pedestrians, erosion/fugitive dust control, and the visual benefits of landscaped parkways, all parkways shall be:

- As wide as possible up to 8 feet wide, given minimum walkways widths of 4 feet in residential zones and 5 feet in commercial zones.
- At the same elevation as the curb and walkway within 6 inches of them, for example, soil 2 inches below edge of curb and walkway elevations and covered with 2 inches of mulch, so the surface elevations of the walkway or curb and adjacent parkway are the same.
- At least 75% unpaved and either 1) slightly swaled, that is, sloping a few inches to the center at not more than a 3:1 slope, to collect storm and irrigation water if the plant materials in the parkway are not walkable or 2) at the same finished elevation as the walkway if the plant materials in the parkway are walkable.
- Irrigated in a manner that results in no overspray onto the walkway or street, e.g., buried in-line drip irrigation system.
- At least 50% covered with plant materials, which 1) do not require mowing more frequently than once every few months, 2) are drought tolerant and can survive with irrigation only occasionally from November - March, once a week April - June, and twice a week July - October (for example, plants listed in WUCOLS III¹ as having Moderate, Low or Very Low water use (see Table 2 for examples), 3) do not exceed a height of 2 feet (excluding trees), 4) do not have thorns or sharp edges adjacent to any walkway or curb, and 5) are located at least 4 feet from any tree trunk.
- Where unpaved, covered with a permeable natural material, e.g., stabilized mulch, decomposed granite, or artificial turf that prevent erosion and dust.



¹ WUCOLS, an acronym for Water Use Classification of Landscape Species, can be downloaded at www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf

For parkways adjacent to curbside parking, if the parkway planting is not walkable (see Table 2 for examples of plants that are walkable), a means of access from the curb to the walkway shall be provided. It may vary with the adjacent use and street characteristics, for example:

- On heavily trafficked streets (major and minor arterials), an 18 inches wide paved, walkable strip along the back of the curb that is at the same finished elevation as the curb should be provided.
- Adjacent to single-family homes and low-density multi-family housing (2 to 4 units/5,000 SF lot), stepping stones or a walkway across the parkway should be provided every 50 feet.

Where there is no curbside parking and the parkway is not walkable, a path or stepping stones shall be provided every 50 feet.

As specified on page 2, plants with thorns should not be planted adjacent to any walkway where someone might come in contact with the thorns.



A “landing strip” at the curb allows easy access from parked cars.



A path across the parkway completes access from parked cars to the walkway.

ARTIFICIAL TURF

Bellflower residents also have the option of replacing their grass parkways (and front yards) with artificial turf. Since there are a number of varieties of turf available to residents, the City has set certain minimum parameters to assist in choosing which type of turf to use. Table 1 below will guide you through the City’s standards for the placement of artificial turf in your parkway and front yard.

For more information about installing artificial turf on private property, contact the Planning Department at 562-804-1424, extension 2011.



TABLE 1. STANDARDS FOR ARTIFICIAL TURF

<i>Development Standard</i>	<i>Minimum to Maximum Range</i>	<i>Condition of Approval/Comments</i>
Pile Height	1” to 2.5”	The length of the pile fibers or blades shall simulate the appearance of the length of natural grass.
Gauge Rate	3/8” to 1/2”	
Face Weight	50 oz. to 100 oz.	
Infill	¾ of a lb. to 4 lbs. per sq. ft.	Infill must be a coated or rubber coated sand infill. Infill shall be maintained to ensure that fibers remain in an upright position.
Staples and Nails	3” to 5” on center	Staples and nails shall be used to help the turf stay in place.
Backing	Drain holes 4” to 6” on center	Proper drainage shall be installed underneath the turf to prevent excessive run-off or pooling.
Color	Duo to Tri-Color	The color of artificial turf shall provide a natural grass green appearance. In addition, artificial turf shall have a minimum 8-year “No Fade” warranty.
Boarder	2”x 2” to 2” x 4”	½ staples shall be provided every 4”.
Lead Content	Contain less then 300 PPM	Artificial turf shall be in compliance with Proposition 65.
Base	CMB, Class II or DG	The base shall provide stable support for the artificial turf and shall allow for proper drainage.

WHAT'S YOUR TYPE?

TYPE 1 PARKWAY - LOW-MAINTENANCE, WALKABLE PLANTS

If you want a parkway that requires minimal design and maintenance, install walkable plants. Table 2 lists some examples. Most of the grasses listed do not require mowing. Sedge, Buffalo, and Grama Grass can be mowed a few times a year to maintain a lawn-like appearance.

TYPE 2 PARKWAY - LOW-GROWING, LOW-MAINTENANCE PLANTS

If you want a parkway that requires a little more design and the addition of a walkway or stepping stones, but still requires minimal maintenance, plant low-growing grasses and/or groundcover. There are many choices; Table 3 lists some of them. Your parkway might be meadow-like in appearance with a mix of grasses and perennials, including some from Table 2 and some from Table 3.

TYPE 3 PARKWAY - COMPLEMENT YOUR FRONT YARD

If you want a parkway that is an extension of your sustainable, non-lawn front garden, use low- to medium-height grasses, shrubs and perennials. There are many plant choices with this parkway type. Table 4 lists some reliable drought-tolerant natives that are taller - but still less than 3 feet tall - that can be mixed in with plants in Table 3.

Notes:

1. *There are many other plants that are suitable for parkways, which you can find in the On-Line and Other Resources section below.*
2. *Artificial turf may be used upon approval.*

UNPERMITTED DESIGN ELEMENTS

- Use of hardscape materials that exceed 50% of the total parkway surface area.
- Use of hardscape, pavers or decomposed granite around utility boxes.
- Use of pebbles, rocks or boulders.
- Use of a uniform design that only uses one material.
- Use of plants with thorns or sharp edges.
- Use of structures within the parkway.
- Use of plant materials that exceed 2 feet in height (excluding trees).

DIGGING IN

PREPARING YOUR PARKWAY SOIL

The most important thing you can do to ensure your parkway's success is to prepare the soil. Soil preparation saves you money in the long run because it reduces the need to replace plants, lowers water use and reduces fertilizer applications.

- Remove all existing turf - let it die and dig it out.
- Remove enough soil to create the swale described on page 2 and then remove 2-3 inches more.
- Till the parkway soil to depth of one foot.
- Amend it with compost.

MAINTAINING YOUR DROUGHT-TOLERANT PARKWAY

Too much water can kill drought-tolerant plants. The best approach is to water only when the soil is dry at a depth of 3 to 4 inches. Or, turn on your in-line drip irrigation two times a week (45 minutes each time) to establish your parkway (first 3 months); then, once it is established, once a week from October through March and twice a week from April through September.

Too much water can also lead to unintentional overgrowth. If this happens, take all necessary steps to keep the parkway maintained within the parameters of this guideline, including, but not limited to, trimming back any overgrown plants that are hanging over the sidewalk or curb, and clipping taller plants to a height below 2 feet.

LANDSCAPING YOUR PRIVATE PROPERTY

Please contact the Planning Department at 562-804-1424, extension 2011 to learn more about the process, application and requirements for installing drought tolerant plants or artificial turf on private property.

ON-LINE AND OTHER RESOURCES

Use these resources to view images, recommended spacing, and detailed descriptions of these plants and others:

www.bewaterwise.com
www.theodorepayne.org
www.socalwatersmart.com
www.sunset.com, or *Sunset Western Garden Book California Native Plants for the Garden* Bornstein et al.

Table Legend

N = California or Southwest native
 L = Low water use
 M = Moderate water use
 o.c. = on center

TABLE 2. EXAMPLE TYPE 1: WALKABLE PLANTS - NO PATH REQUIRED

Botanical Name	Common Name	Water Use	Height x Spacing	Notes
<i>Low Water Use/Low or No Mow Turf or Grass-like Perennials</i>				
<i>Buchloe dactyloides</i> UC Verde™	UC Verde™ Buffalo Grass	N, L	6" x 6"	Winter dormant (brown)
<i>Bouteloua gracilis</i> 'Hachita'	'Hachita' Blue Grama Grass	N, L	6" x 6"	
<i>Carex pansa</i> (<i>C. praegracilis</i>)	California Meadow Sedge	N, M	6" x 9"+	Grows in shade or sun
<i>Low-Growing Perennials (12 inches or less)</i>				
<i>Achillea millifolium</i> cultivars	Achillea cultivars	L	12" x 3'	Mow 3-4x/year
<i>Chamaemelum nobile</i>	Chamomile	M	8" x 12"	
<i>Dymondia margaretae</i>	Dymondia	L	3" x 6"	Slow growing

Other untested ideas: There are several lawn substitute seed mixes, including Fleur de Lawn and Ecology Lawn, which may work.

Buchloe dactyloides UC Verde™



Bouteloua gracilis 'Hachita'



Carex pansa (*C. praegracilis*)



Achillea millifolium cultivar
(mowed)



Chamomile



Dymondia margaretae



TABLE 3. EXAMPLE TYPE 2: LOW-GROWING, LOW-MAINTENANCE PLANTS - PATH REQUIRED

Botanical Name	Common Name	Water Use	Height x Spacing	Notes
<i>Low-Growing Grasses or Grass-like Perennials (18 inches or less)</i>				
<i>Carex divulsa</i> (C. <i>tumincola</i>)	Berkeley Sedge	N, M	12" x 2'	
<i>Festuca glauca</i> 'Siskiyou Blue' & other var.	Blue Fescue	M	12" x 12"	
<i>Pennisetum alopecuroides</i> 'Little Bunny'	Little Bunny Fountain Grass	L	12" x 12"	
<i>Sesleria autumnalis</i>	Autumn Moor Grass	M	15" x 2'	
<i>Low-Growing Perennials/Succulents (18 inches or less)</i>				
<i>Achillea millifolium</i> 'Terra Cotta'	Yarrow Terra Cotta & other cultivars	L	12" x 4'	Mow 1/year for meadow
<i>Aptenia cordifolia</i> /A. <i>cordifolia</i> 'Red Apple'	Heartleaf Ice Plant	L	6" x 12"	
<i>Delosperma cooperi</i>	Trailing Ice Plant	L	8" x 15"	
<i>Drosanthemum floribundum</i>	Rosea Ice Plant	L	8" x 15"	
<i>Dudleya hassei</i>	Santa Catalina Live Forever	N, VL	8" x 18"	
<i>Erigeron karvinskianus</i> & E. <i>glaucus</i>	Santa Barbara & Seaside Daisy	N,M	12" x 2'	
<i>Fragaria vesca</i> ssp. <i>Californica</i> or F. <i>chiloensis</i>	Woodland or Coastal Strawberry	N, M	8" x 2'	Grows in shade
<i>Gazania rigens leucolaena</i>	Gazania (grayish lvs.)	M	6" x 2'	
<i>Gazania linearis</i> 'Colorado Gold'	Colorado Gold Gazania (green leaves)	M	6" x 2'	
<i>Hypericum calycinum</i>	Creeping St. Johnswort	M	12" x 12"	Clip yearly; likes shade
<i>Iris douglasiana</i> & 'Pacific Coast Hybrids'	Douglas & Pacific Coast Iris	N, M	12" x 18"	Mix with grasses
<i>Lantana</i> Patriot series cultivars	Dwarf Lantana	L	12" x	
<i>Lessingia filaginifolia</i> 'Silver Carpet'	Beach Aster	L	12" x 4'	
<i>Monardella villosa</i>	Coyote Mint	N, VL	15" x 2'	
<i>Nepeta mussinii</i> (N. <i>faassenii</i>)	Catmint	M	15" x 18"	
<i>Osteospermum fruitcosum</i>	Trailing African Daisy	L	6" x 18"	
<i>Oenothera caespitosa</i> & other species	Tufted evening primrose	N,L	12" x 2'	
<i>Rosmarinus officinalis</i> 'Huntington Carpet' or other prostrate varieties	Prostrate Rosemary	L	18" x 2'	
<i>Scaevola aemula</i> varieties	Fairy Fan Flower		8" x 2'+	
<i>Senecio serpens</i> , S. <i>mandraeliscae</i>	no common name	L	12" x 2'	
<i>Thymus</i> species	Thyme	M	8" x 2'	
<i>Verbena peruviana</i> & hybrids	Verbena	L	6" x 2'	
<i>Vinca minor</i>	Dwarf Periwinkle	M	12" x 4'	Plant in shade
<i>Low-Growing Shrubs (18 inches or less) - all require regular trimming at parkway edges</i>				
<i>Ceanothus</i> 'Centennial'		N, L	18" x 4'	Needs good drainage
<i>Cotoneaster dammeri</i> 'Lowfast', C. <i>salicifolia</i> 'Repens', C. <i>apiculatus</i> 'Tom Thumb'	Groundcover Cotoneaster varieties	M	18" x 4'	
<i>Juniperus horizontalis</i> & J. <i>procumbens</i> var.	Groundcover Juniper varieties	L	6-18" x 4'	See Sunset for list

Carex divulsa



Festuca glauca



Sesleria autumnalis



Pennisetum
'Little Bunny'



Achillea
'Terra Cotta'



Apena cordifolia
'Red Apple'



Delosperma cooperi



Drosanthemum floribundum



Dudleya hassei



Erigeron glaucus
'Wayne Roderick'



Gazania rigens leucolaena



Gazania linearis



Fragarea chiloensis



Hypericum calycinum



Iris douglasiana



Lantana
'Patriot Rainbow'



Lessingia filaginifolia
'Silver Carpet'



Mondardella villosa



Nepeta mussinii



Osteospermum fruitcosum



Oenothera caespitosa



Rosmarinus officinalis



Scaevola aemula



Senecio mandraealiscae



Thymus



Verbena peruviana
varieties



Vinca minor



Ceanothus 'Centennial'



Cotoneaster dammeri



Juniperus procumbens



Juniperus horizontalis
Varieties



TABLE 4. EXAMPLE TYPE 3 MEDIUM HEIGHT, DROUGHT TOLERANT PLANTS - PATH AND MORE MAINTENANCE REQUIRED

Botanical Name	Common Name	Water Use	Height x Spacing	Notes
18" to 36" Tall Grasses				
<i>Helictotrichon sempervirens</i>	Blue Oat Grass	L	2' x 2'	
<i>Leymus condensatus</i> 'Canyon Prince'	Canyon Prince Wild Rye	N, L	2' x 3'	
<i>Nasella tenuissima</i> (<i>Stipa tenuissima</i>)	Mexican Feather Grass	N, V L	2' x 2'	
<i>Pennisetum orientale</i>	Oriental Fountain Grass	L	18" x 18"	
<i>Pennisetum setaceum</i> 'Eaton Canyon'	Dwarf Red Fountain Grass	L	2' x 3'	
18" to 36" Tall Perennials/Succulents				
<i>Aloe</i> 'Blue Elf' & other small varieties	Blue Elf Aloe	L	18" x 18"	
<i>Anigozanthos</i> 'Bush Pearl', 'Bush Ranger' & 'Bush Devil'	Kangaroo Paws varieties		2' x 2'	
<i>Limonium perezii</i>	Statice	L	2' x 3'	+ Flower height
<i>Lomondra longifolia</i> 'Breeze' & 'Little Con'	Lomondra cultivars	M	2' x 3'	
<i>Penstemon heterophyllus</i> 'Margarita BOP'	Foothill Penstemon	N, M	18" x 18"	
<i>Phormium</i> 'Tom Thumb' & 'Jack Spratt'	Small Flax hybrids	M	2' x 2'	
18" to 36" Tall Shrubs				
<i>Arctostaphylos densiflora</i> 'Pacific Mist'		N, L	2' x 6'	
<i>Artemisia pycnocephala</i> 'David's Choice'	David's Choice Sandhill Sagebrush	N,	2' x 3'	
<i>Ceanothus gloriosus</i> 'Anchor Bay'		N, L	2' x 6'	
<i>Cistus salvifolius</i>	Sageleaf Rockrose	L	2' x 3'	
<i>Iva hayesiana</i>	Poverty Weed	N, VL	2' x 3'	
<i>Lantana montevidensis</i>	Trailing Lantana	L	2' x 3'	Cut back yearly
<i>Lantana</i> 'Gold Rush', 'New Gold' & 'Chapel Hill Yellow'			2' x 3'	Monrovia Co.
<i>Mimulus</i> hybrids inc. 'Jelly Bean Yellow'	Shrubby Monkeyflower hybrids	N, L	2' x 3'	
<i>Rosa</i> Flower Carpet varieties	Groundcover Roses	M	2' x 3'	Monrovia Co.
<i>Salvia</i> 'Bee's Bliss'	Bee's Bliss Sage	N, L	2' x 4'	

Helictotrichon sempervirens



Leymus condensatus
'Canyon Prince'



Nasella tenuissima



Pennisetum orientale



Pennisetum setaceum
'Eaton Canyon'



Aloe
'Blue Elf'



Anigozanthos
'Bush Pearl'



Limonium perezii



Lomandra longifolia
'Breeze'



Penstemon heterophyllus
'Margarita BOP'



Phormium
'Jack Spratt'



Arctostaphylos densiflora
'Pacific Mist'



Artemisia pycnocephala
'David's Choice'



Ceanothus gloriosus 'Anchor Bay'



Ceanothus gloriosus 'Anchor Bay'



Cistus salvifolius



Iva hayesiana



Lantana montevidensis



Lantana 'Gold Rush'



Mimulus 'Jelly Bean Yellow'



White Flower Carpet Rose



Red Flower Carpet Rose



Amber Flower Carpet Rose



Salvia
'Bee's Bliss'



EXAMPLES OF TYPE 1 PARKWAYS: WALKABLE PLANTS



California Meadow Sedge (*Carex pansa*) can manage with little or no supplemental water from November - April and irrigation once a week the rest of the year. It can be mowed a few times a year for a more lawn-like appearance.



UC Verde Buffalo grass (*Buchloe dactyloides* UC Verde™) is a drought-tolerant cultivar of Midwest native Buffalo grass.



Dymondia (*Dymondia margaritae*) is a low growing, walkable groundcover.



Regularly mowed Yarrow (*Achillea millifolium*) is lawn-like.

EXAMPLES OF TYPE 2 PARKWAYS: LOW GROWING, LOW MAINTENANCE



Berkeley Sedge (*Carex divulsa*) requires very little care and similar water to California Meadow Sedge.



Gazanias are a reliable relatively drought-tolerant groundcover that tolerates light traffic.



Autumn Moor Grass (*Sesleria autumnalis*) requires very little care and similar water to the Sedges.



A prostrate Rosemary like 'Huntington Carpet'.

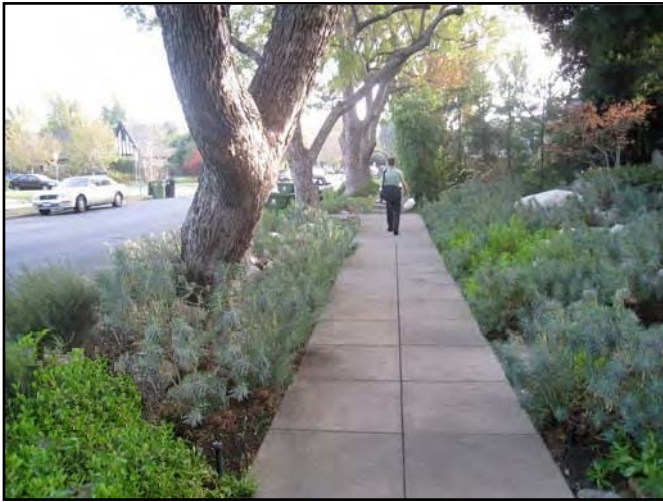


Blue Fescue (*Festuca* cultivars) requires good drainage and tolerate some shade.

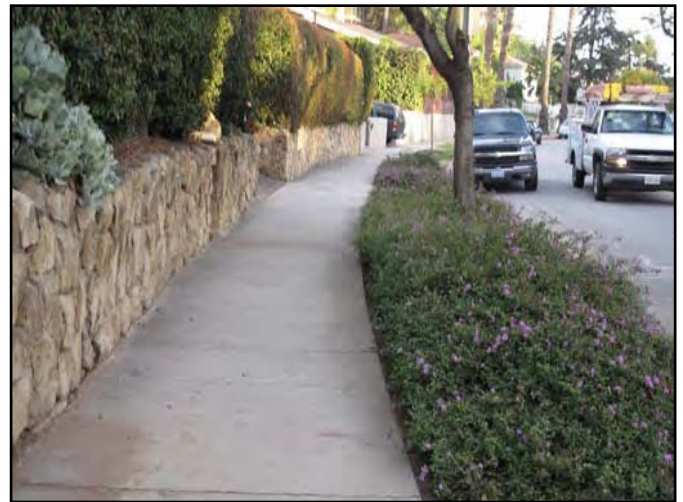


Dwarf Periwinkle (*Vinca minor*) is a good choice for a shady parkway.

EXAMPLES OF TYPE 3 PARKWAYS: PERENNIAL GARDENS



This mix of drought-tolerant perennials extends the front yard landscaping to the curb. It is beautifully maintained and would be a perfect example if the parkway were swaled rather than mounded.



Lantana needs to be cut back so it does not become too tall and woody.

OTHER EXAMPLES



Mexican Feather Grass (*Nasella tenuissima*) needs to be cut back to about 9" high every winter. It self-seeds and spreads but can be managed.



Autumn Moor Grass and other low, clumping grasses require little maintenance.

Special Parkway Conditions



While plants should not be placed within 4' of a tree trunk to reduce competition for nutrients, grasses and clumping perennials may be planted between large surface roots farther away, provided they do not adversely affect the tree.

