

# Landscape Trees for Pacific Grove



a Guide to  
Selection, Planting and Care

January 11, 2011



## CITY OF PACIFIC GROVE

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Dear Friend:

More than a century ago, the City of Pacific Grove was founded in a forest. Trees grew in profusion—pine, oak, cypress, even redwood. Since then, we have lost much of that forest.

Trees have always been an integral part of Pacific Grove's character, lending charm and a distinctive appearance, setting us apart from other coastal communities. In a time when many of California's cities are losing trees faster than they are being replaced, we must do we all we can to ensure that trees will always flourish in Pacific Grove.

To achieve this goal, we ask you, the residents and business people of Pacific Grove, to join the City, your friends, and neighbors in helping to restore our urban forest.

This Landscape Tree Guide was developed to provide assistance in choosing and caring for our trees. City staff and committees will use the guide for tree plantings along streets, in parks, and in other public places. We hope you will review the more than 40 species listed here and find a species you would like to plant at your home or business.

Trees are one of our most valuable assets. They make our neighborhoods more livable, creating a buffer from the busy pace of modern life. They contribute towards clean air, soil and water conservation, and energy savings. They increase the value of our homes and the economic vitality of our businesses. They provide a habitat for wildlife—including over-wintering Monarch butterflies.

Most of all, trees greatly enhance the unique beauty of Pacific Grove. Through our combined efforts, we can ensure that it will always be so. Thank you for your active participation.

Sincerely,

Carmelita Garcia

Mayor

January 11, 2011

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### BENEFITS OF TREES

The City of Pacific Grove is committed to a policy of maintaining and expanding a diverse population of street trees as an essential component of the urban forest in the City. Benefits of a healthy urban forest include the following:

- **Increased real estate values**
- **Improved air quality**
- **Improved water quality**
- **Saves heating and cooling energy**
- **Reduces noise pollution**
- **Improved aesthetic environment**
- **Improved wildlife habitat**
- **Improved psychological well-being**

In addition, the City aims to increase public participation and involvement in the promotion of a healthy urban forest. The City currently maintains approximately one quarter of Pacific Grove's urban forest. The balance is maintained by the private property owner. Consequently, the individual property owner plays a vital role in the maintenance and development of Pacific Grove's urban forest. This guide is designed to assist the property owner in making informed decisions for the trees on his/her property. It includes information on the selection, planting and maintenance of trees, as well as the permit process and references to tree-related organizations.

## PLANNING AHEAD - CHOOSING THE RIGHT TREE FOR THE RIGHT SPOT

Thinking and planning ahead may be the most important step in your effort to help our urban forest. How well you plan may determine whether or not your tree lives and thrives. Here are a few sample questions to consider:

Have I chosen the right tree?

- Will the tree grow well in this climate and soil?
- Did the seed or seedling come from my local area, giving it a better chance to survive?
- Is it the size and shape I want?

Have I chosen the right place to plant it?

- Is anything overhead or around it that might obstruct its growth?
- What kind of human activity takes place here?
- Is there good drainage and room for the roots to expand?

Do I have enough resources to plant and care for the tree?

- How much money will I need?
- What materials and equipment will I need?
- How many people can I get to help?

Do I have permission to plant here?

- What do the city and county ordinances say about who can plant what and where?
- Will my neighbors or whoever share the space agree?

We hope this booklet will help you answer these questions. For more details about planting trees contact the City Forester, your local nursery, or a certified arborist.



### FOR FURTHER INFORMATION:

- *Sunset Western Garden Book*: Lane Publishing Co., Menlo Park, CA.; an encyclopedia of plants and a good horticultural guide. It is available at most bookstores.
- *Trees for San Francisco - A Guide to Street-Tree Planting and Care*: Friends of the Urban Forest's street tree photos and information booklet. Call Friends of the Urban Forest at (415)-543-5000 to purchase.

# Pacific Grove Landscape Tree List

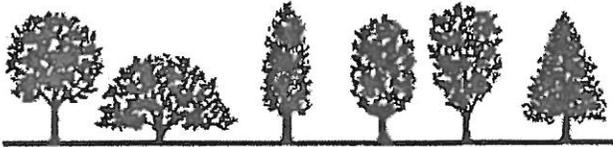
Botanical Name Common Name 'Cultivated Variety'		Height			Spread			Shape				Density			Growth Rate Per Year			Sun Exposure					
		Small - Up to 15 ft.	Medium - 15 to 30 ft.	Large - 30 to 50 ft.	Very Large - Over 50 ft.	Narrow, under 20 ft.	Average, 20 to 40 ft.	Broad, over 40 ft.	Round	Spreading	Columnar	Oval	Upright	Pyramidal	Open	Medium	Dense	6" Max - Slow	Moderate	1' Min - Rapid	Sun	Sun - Shade	Shade
<b>CONIFERS</b>																							
1	<i>Cedrus deodora</i> Deodar Cedar			●			●							●					●		●		
2	<i>Cupressus macrocarpa</i> Monterey Cypress (Ca. Native)			●			●		●						●					●	●	●	
3	<i>Pinus canariensis</i> Canary Island Pine				●		●			●					●					●	●		
4	<i>Pinus pinea</i> Italian Stone Pine			●			●		●						●				●		●	●	
5	<i>Pinus radiata</i> Monterey Pine (Ca. Native)				●				●						●					●	●	●	
6	<i>Pinus torreyana</i> Torrey Pine (Ca. Native)			●					●						●					●	●		
7	<i>Sequoia sempervirens</i> Coast Redwood (Ca. Native)				●		●						●			●				●	●	●	
<b>BROADLEAF EVERGREEN TREES</b>																							
8	<i>Acacia melanoxylon</i> Blackwood Acacia				●		●				●				●					●	●	●	●
9	<i>Arbutu unedo</i> Strawberry Tree 'Marina'		●				●		●		●				●				●		●	●	●
10	<i>Callistemon citrinus</i> Lemon Bottlebrush		●				●		●						●				●		●	●	
11	<i>Callistemon viminalis</i> Weeping Bottlebrush		●				●		●					●					●		●	●	
12	<i>Cinnamomum camphora</i> Camphor Tree			●				●	●						●				●		●	●	
13	<i>Eriobotrya deflexa</i> Bronze Loquat		●				●		●						●				●		●	●	
14	<i>Eriobotrya japonica</i> Loquat		●				●		●						●				●		●	●	
15	<i>Eucalyptus ficifolia</i> Red Flowering Gum			●			●		●						●				●		●	●	



# Pacific Grove Landscape Tree List

Botanical Name Common Name 'Cultivated Variety'		Height	Spread	Shape	Density	Growth Rate Per Year	Sun Exposure
<i>BROADLEAF EVERGREEN TREES</i>							
16	<i>Eucalyptus nicholii</i> Nichol's Willow-Leafed Peppermint	●		●	●		● ●
17	<i>Geijera parviflora</i> Australian Willow	●	●		●	●	● ●
18	<i>Magnolia grandiflora</i> Southern Magnolia 'Russett' 'St. Marys'		●	●		●	● ●
19	<i>Lyonothamnus floribundus asplenifolius</i> Fernleaf Catalina Ironwood	●	●		●	●	● ●
20	<i>Maytenus boaria</i> Mayten Tree 'Green Showers'	●	●	● ●		●	● ●
21	<i>Melaleuca quinquenervia</i> Cajeput Tree	●	●	●	●	●	● ●
22	<i>Melaleuca styphelioides</i> Rigid Leaf Paperbark Tree	●	●		● ●	●	● ●
23	<i>Meterosideros excelsus</i> New Zealand Christmas Tree	●	●	●	●	●	● ●
24	<i>Myoporum laetum</i> Myoporum	●	●	●		●	● ● ●
25	<i>Olea europaea</i> Olive	●	●	●	●	●	● ●
26	<i>Pittosporum undulatum</i> Victorian Box	●	●	●	●	●	● ●
27	<i>Podocarpus gracilior</i> African Fern Pine	● ●	●	●	● ●		● ● ●
28	<i>Prunus Caroliniana</i> Carolina Laurel Cherry	●	●	●	●	●	● ●
29	<i>Quercus agrifolia</i> Coast Live Oak (Calif. Native)	●	●	●	●	●	● ●

# Tree Shapes



Round Spreading Columnar Oval Upright Pyramidal

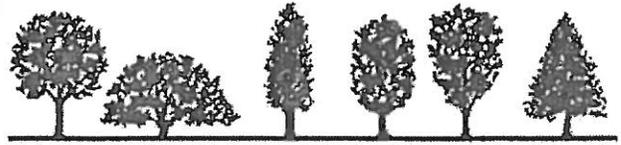
Drought	Coastal Conditions	Wind	Oak Root Fungus Resistant	Frost Tolerant to 26° F	Aromatic	Attracts Birds	Attracts Monarch Butterflies	Fruit - Flower	Fall Color	Unusual Leaves	Clean - Neat	Bark	Deer Resistant	Good Under Utilities	Small, Contained Areas	Lawn or Irrigated Areas	Good for Street Tree		
Tolerances			Outstanding Characteristics										Possible Sites		Comments				
				●	●								●					●	Gracefull, weeping blue-green, fine-textured foliage has peppermint smell when crushed. Too much water can cause chlorosis. 16
●			●	●						●	●			●				●	Has grace of willow; toughness of eucalyptus; deep, non-invasive roots; pest free. 17
			●	●				●		●			●					●	Large white fragrant flowers; large glossy leaves & pods a litter problem. Surface roots lift side-walks. Likes ample water. 'St. Mary's, a smaller, slower growing variety, is ok beneath wires. 18
●	●	●						●		●			●						Tiny white flowers in clusters; Rough, shredding, red-brown bark. Requires annual pruning; Stake & prune when young. Needs good drainage. 19
			●										●				●		Weeping form; delicate, apple-green foliage; needs good drainage & deep initial watering to avoid suckers & voracious surface roots that destroy concrete; Prune to remove suckers. 20
●	●	●		●							●	●	●					●	Peeling, spongy, cream to brown bark; yellowish flowers in summer & fall, 1/2" hard brown seed capsules; good for narrow sidewalks; tolerates poor drainage. 21
●		●	●					●		●			●	●				●	Pendulous branchlets; lacy, open growth; peeling bark; creamy white flowers summer to fall; brittle wood; tolerates water, good in lawns. 22
●	●	●						●		●			●				●	●	Showy red flowers in early summer; sidewalk cleanup during flower drop; stake & prune when young; good street tree, needs root barrier in narrow site; excellent in windy, salt air. 23
●	●	●		●				●	●	●			●						Attractive multi-trunked tree if staked & pruned; thin to prevent top-heaviness & wind damage; superb for seaside use; not for tailored gardens; some leaf drop at all times; invasive roots. 24
●	●	●				●							●	●				●	Grey-green foliage; insignificant flowers. Dark green to black 1" edible fruit in late fall attracts birds but stains sidewalks. Plant fruitless varieties to avoid fruit drop; requires frequent pruning & removal of suckers. 25
●		●			●			●					●				●	●	Wavy-edged leaves, Fragrant creamy white flowers in early spring open to sticky orange seeds that are messy. Shallow, greedy root system limits other plants. 26
			●								●						●	●	Not a pine; irregular form; dark blue-green, glossy narrow leaves; insignificant fruit & flowers; train to single trunk when young; Needs good drainage; disease & pest resistant. 27
●	●		●			●	●	●											Attractive as multistemmed tree; small creamy white flowers in spikes, Feb-April. Half inch black fruit a litter problem over pavement. Does poorly in alkaline soils. 28
●	●		●			●							●						Needs considerable space; avoid watering within 4' of base; attracts many native birds. 29

**Note about deer resistance:** Although some trees are more resistant to deer browsing than others, hungry deer will nibble nearly any newly planted tree. For best success, protect young trees with wire exclosures.

# Pacific Grove Landscape Tree List

Botanical Name Common Name 'Cultivated Variety'		Height	Spread	Shape	Density	Growth Rate Per Year	Sun Exposure
<i>BROADLEAF EVERGREEN TREES</i>							
30	<i>Quercus suber</i> Cork Oak	●	●	●	●	●	●
31	<i>Schinus terebinthifolius</i> Brazilian Pepper Tree	●	●	●	●	●	●
32	<i>Ulmus parvifolia</i> Chinese Elm 'Drake'	●	●	●	●	●	●
<i>DECIDUOUS TREES</i>							
33	<i>Aesculus carnea</i> Ruby Horse Chestnut 'Briotii'	●	●	●	●	●	●
34	<i>Fagus sylvatica</i> Copper Beech	●	●	●	●	●	●
35	<i>Ginkgo biloba</i> Maidenhair Tree 'Autumn Gold'	●	●	●	●	●	●
36	<i>Liquidambar styraciflua</i> American Sweet Gum 'Burgundy' 'Festival' 'Palo Alto'	●	●	●	●	●	●
37	<i>Liriodendron tulipifera</i> Tulip Tree	●	●	●	●	●	●
38	<i>Magnolia soulangeana</i> Saucer Magnolia	●	●	●	●	●	●
39	<i>Malus floribunda</i> Japanese Flowering Crabapple	●	●	●	●	●	●
40	<i>Pyrus calleryana</i> Ornamental Flowering Pear	●	●	●	●	●	●
41	<i>Platanus acerifolia</i> London Plane Tree 'Bloodgood' 'Yarwood'	●	●	●	●	●	●
42	<i>Prunus cerasifera</i> Flowering Plum 'Krauter Vesuvias' 'Thundercloud'	●	●	●	●	●	●

# Tree Shapes



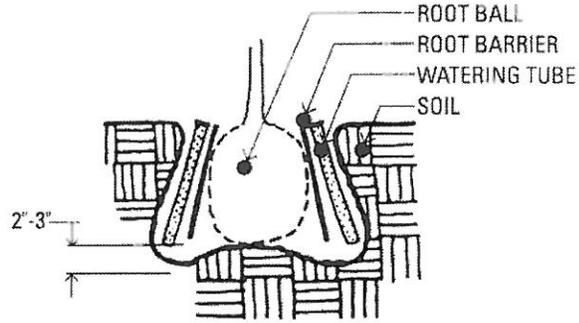
Round Spreading Columnar Oval Upright Pyramidal

Tolerances													Outstanding Characteristics					Possible Sites			Comments
Drought	Coastal Conditions	Wind	Oak Root Fungus Resistant	Frost Tolerant to 26° F	Aromatic	Attracts Birds	Attracts Monarch Butterflies	Fruit - Flower	Fall Color	Unusual Leaves	Clean - Neat	Bark	Deer Resistant	Good Under Utilities	Small, Contained Areas	Lawn or Irrigated Areas	Good for Street Tree				
●				●								●	●				●	Trunks with thick, corky bark; very drought tolerant; needs good drainage. 30			
●		●		●		●	●									●		● Bright red berries showy in winter; feed & water infrequently & deeply to discourage surface roots. 31			
●			●	●							●							● Weeping habit; older trees have shedding bark. Aggressive surface roots can damage sidewalks; stake & prune when young. 32			
						●	●						●	●		●	●	● Showy pink to red flower clusters April-May; requires sidewalk clean-up during flower drop; needs summer watering; susceptible to powdery mildew & leaf spot. 33			
								●				●						● Beautiful foliage; protect from winds; salts in soil or water stunt growth & turn leaves brown. 34			
●										●	●		●	●		●	●	● Brilliant yellow leaves in fall, drop all at once; likes well drained soil. Never prune central leader; stake when young; disease & pest resistant; long-lived. 35			
●		●	●					●	●				●				●	● Maple-like leaves; dependable fall color varies with variety from yellow-orange-red to burgundy; spiny seed capsules, though decorative, drop in winter & require clean-up; surface roots can be nuisance in lawns or parking strips. Disease & pest resistant. 36			
			●	●				●	●							●		● Bright yellow-green leaves; tulip shaped greenish yellow flowers in late spring; likes well drained soil; susceptible to aphids; good lawn tree. 37			
				●			●	●			●			●	●	●	●	● Large white, pink, or purplish red flowers bloom in winter before leaves come out. Blooms at 3-5 yrs. 38			
			●	●		●	●	●						●	●	●	●	● Fine textured foliage; red to pink buds open to white flowers; prune only to build framework and to correct shape; needs summer watering; susceptible to aphids. 39			
			●	●			●	●								●		● White flowers in early spring; purplish-red fall color; narrow crotches subject to breakage as tree matures. 40			
●			●	●			●	●				●	●			●	●	● Lobed, maplelike leaves. Bark sheds in striking patches. Brown, ball-like seed clusters hang from branches through winter. Watch for spider mites and scale. 'Bloodgood' somewhat resistant to anthracnose; 'Yarwood' resistant to powdery mildew. 41			
			●			●	●	●		●				●	●	●		● Pink to white flowers in early spring. Green, red, or purple foliage depending on variety. Susceptible to caterpillars, slugs, aphids and spider mites; some fruit drop; will grow in almost any soil. 42			

**Note about deer resistance:** Although some trees are more resistant to deer browsing than others, hungry deer will nibble nearly any newly planted tree. For best success, protect young trees with wire exclosures.

## PLANTING TREES

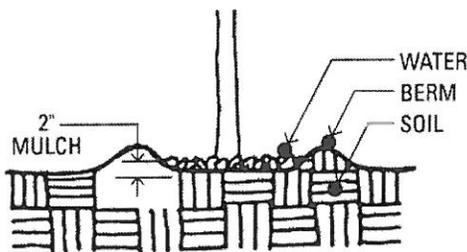
**Planting Hole:** The planting hole should be excavated 1-2 inches less than the height of the root ball and twice the root ball diameter. Loosen soil at the sides and bottom of the hole. If amendments are added to the backfill soil, they should be composed of slowly decomposing organic matter, thoroughly mixed, and amount to no more than 40% of the overall soil volume. Filling the pit with water and observing the water percolate into the soil will determine whether the soil has adequate drainage. Areas with poor drainage (i.e. very little drainage in 24 hours) should be modified and planted with a species tolerant of wet soil.



**Watering Tube:** (optional) Placement of a 4" by 24" watering tube should be at the grade of the soil and filled with gravel. This tube allows for water to be delivered to the root zone without surface run-off while encouraging deep roots. The application of water through the tube should be done only after the tree is established, usually within 18 to 24 months. Two tubes can also be installed on opposite sides of the root ball to maximize deep watering. Trees planted on a grade should always have the watering tube installed on the uphill side of the root ball.

**Root Barrier:** (optional) Root barriers may be utilized when planting in paved areas and near driveways and sidewalks. They are thought to direct roots down in the soil and consequently minimize root growth directly under pavement.

**Tree Placement:** The tree should be carefully removed from the container to avoid damage to the root ball. Cut any circling roots and remove any matted roots on the surface of the root ball. Orient the tree with the strongest branches facing the prevailing winds.



**Backfilling and Mulching:** Eliminate air pockets by thoroughly flooding the partially backfilled tree pit. The soil should be firmly packed around the root ball to stabilize the newly planted tree. Fill the basin to grade and construct a berm around the outside of the root ball for watering.

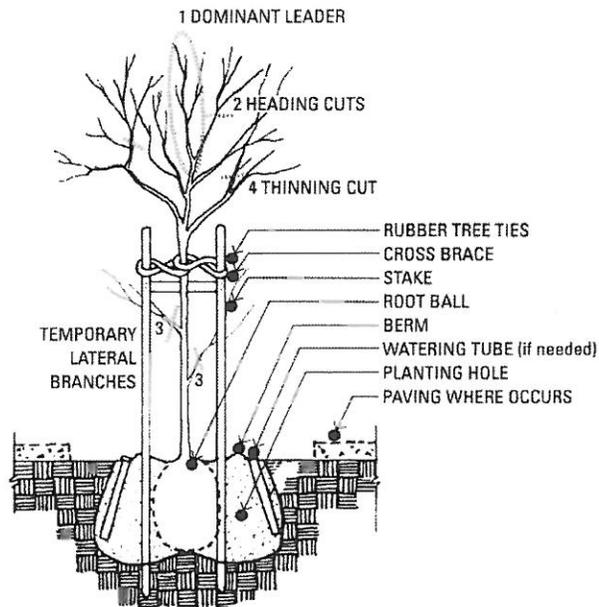
**Staking:** Two 2" x 8' lodge pole pine stakes should be driven into the ground on appropriate sides of the tree and adjacent to the root ball. A one inch by four inch board nailed between the stakes adds to the stability of the stakes but should be positioned in such a way as to avoid damage to the tree by rubbing. Two rubber tree ties should be nailed to the stakes and wrapped in a figure eight pattern around the tree six inches above the point where the tree, if held by hand, will maintain an upright position. Tie the trunk so that the tree can move at least three inches in each direction. This movement stimulates the growth of the tree.

## MAINTENANCE OF NEWLY PLANTED TREES

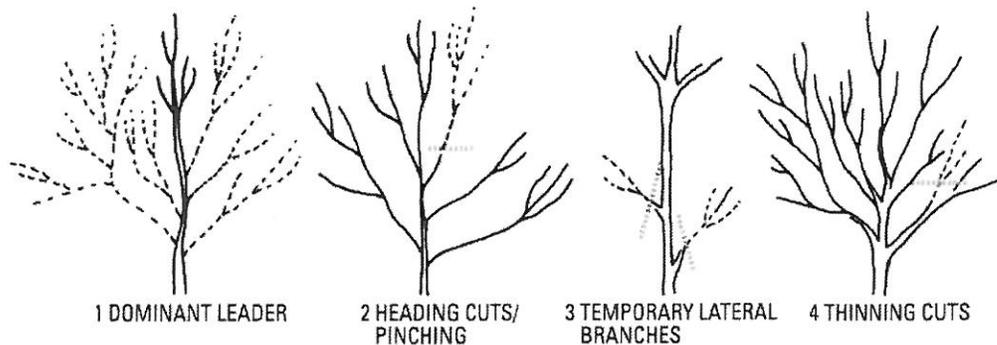
**Basin Maintenance:** Basin maintenance consists of weed and debris removal, stake and strap adjustment or removal, and sucker removal.

**Watering:** Deep, infrequent and slow watering directly over the root ball area will promote deep root growth. Depending on soil type, plant requirements and climatic conditions, a newly planted 15 gallon tree should receive about 5 gallons of water each week during the dry season. After 18 to 24 months of watering directly over the root ball, start watering through the watering tube.

**Pruning:** The most important aspect of young tree pruning is the establishment of a **dominant leader (1)**; **pinch or head back (2)** branches that are competing with the dominant leader. **Temporary lateral branches (3)** (branches that will not be present on the mature tree) must be left to feed and shade the trunk. These branches, which may also be headed appropriately, should be removed only after the tree is established. Do not allow the temporary branches to block pedestrian access on sidewalks. Pruning should emphasize the plant's natural growth habit and be limited to **thinning cuts (4)** and removal of unsound or poorly attached branches.



**Staking:** As soon as the tree is established (usually two years,) the stakes should be removed or modified to encourage a strong trunk, deep rooting and sufficient anchorage.



## PERMITS

### **Tree Planting Procedure**

*Property owners are required to have a permit to plant a street tree in a City easement. No permit is needed to plant trees on private property.*

1. Phone 648-3122 for information.
2. Complete form and return to the City Forester at the Department of Public Works.
3. Department inspection: sidewalk marked where tree is to be planted.

**Permit approved:** Property owner proceeds with planting the tree.

**Permit denied:** A letter of denial is sent to the property owner.

### **Tree Removal Procedure**

*Property owners are required to have a permit to remove street trees. Property owners are required to have a permit to remove any tree on private property which is four inches in diameter at four and one-half feet above the ground.*

1. Tree permit applications are available at the Public Works office (648-3122) and at City Hall (648-3100).
2. Completed applications should be returned to the Public Works office.
3. Department inspection: The City Forester will visit your property and inspect the tree(s) within 10 days. Tree(s) will be posted with removal notice for a period of 10 days if City Forester determines public notice is appropriate.

**Permit approved:** If there are no public objections and the City Forester recommendation concurs, a permit is granted.

**Permit denied:** If there are public objections, a public hearing is scheduled. Notices are posted and mailed out to those concerned.

**Public Hearing:** Any person objecting to any determination of the City Forester shall have the right of appeal to the Natural Resources Committee.

**Permit approved:** Property owner proceeds with removal.

**Permit denied:** Decision may be appealed to City Council.



## REFERENCES

### **City Agencies:**

- City Forester, Department of Public Works - 648-3122  
For questions regarding permits, responsibilities, or professional advice and tree jurisdiction.
- City Hall - 648-3100  
For copy of the Tree Conservation and Protection Ordinance

**Prepared by the City of Pacific Grove's  
Natural Resources Committee  
1998**



The City of Pacific Grove  
gratefully acknowledges the  
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