Sierra Ridge Metropolitan District

Water Wise Garden Guide for Native and Naturalized Plant Palettes to Reduce Water Consumption and Fertilizer Input in Tree Lawns with the Goal of Creating Climate Resilient Landscapes and to Provide Pollinator Habitat.





Sierra Ridge Metropolitan District Douglas County, Colorado, United States



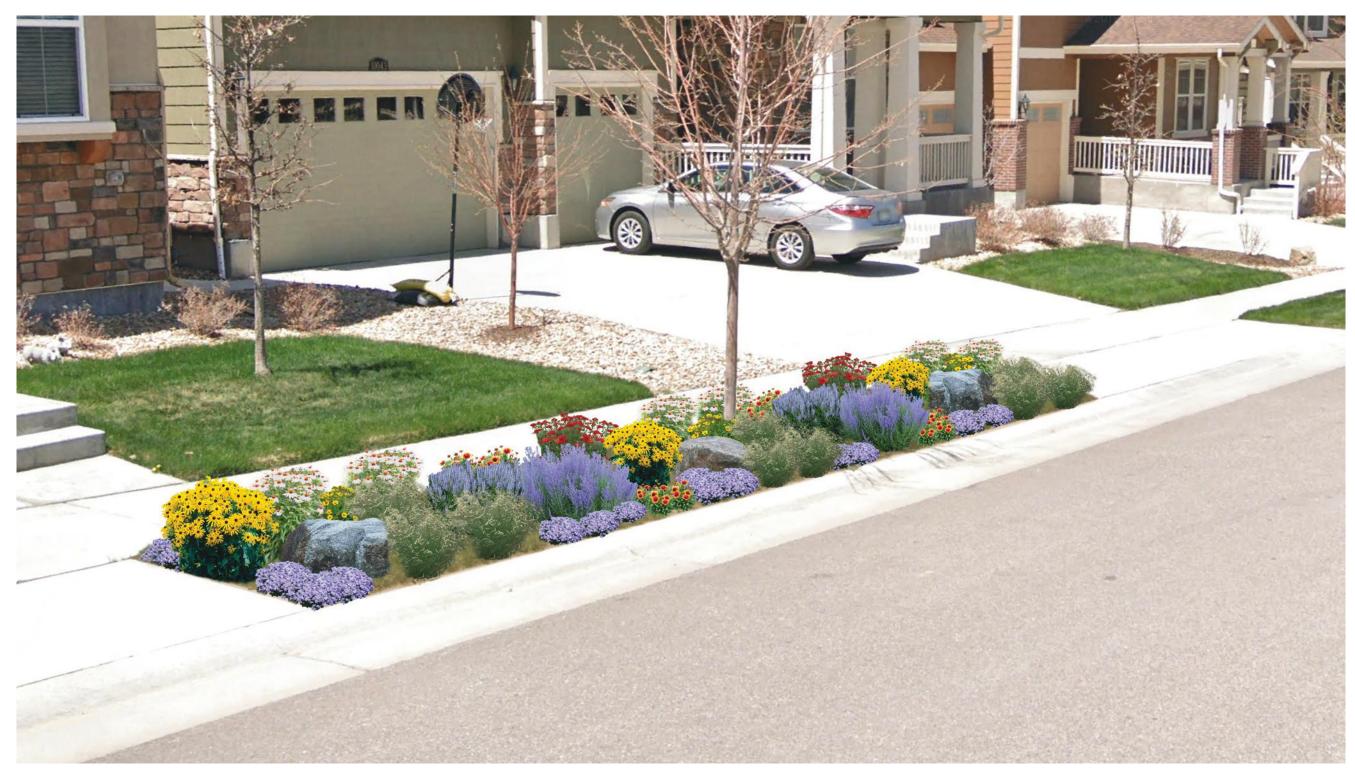
Index

| Summer Sun | |
|-----------------------------------|----|
| Illustrative Rendering | 3 |
| Layout and Schedule | |
| Plant Palette Images | |
| Fall Fiesta | |
| Illustrative Rendering | 6 |
| Layout and Schedule | 7 |
| Plant Palette Images | 8 |
| Pollinator Garden | |
| Illustrative Rendering | 9 |
| Layout and Schedule | |
| Plant Palette Images | |
| High Plains Desert | |
| Illustrative Rendering | 12 |
| Layout and Schedule | |
| Plant Palette Images | |
| Cool Breeze | |
| Illustrative Rendering | 15 |
| Layout and Schedule | |
| Plant Palette Images | |
| Summer Shade | |
| Illustrative Rendering | 18 |
| Layout and Schedule | |
| Plant Palette Images | |
| Planting Specifications | |
| Details and Irrigation Diagram | 21 |
| Landscape Material Specifications | |
| Mulch | 22 |
| Boulders | 23 |
| Edging | 24 |

- The following document has been prepared by LEAF Design Works for the Sierra Ridge Metropolitan District and its Residents.
- The guidelines reflect what is known as industry leading best practices at the time of creation of this document.
- The six water wise garden templates serve as a guide to convert the street facing tree lawns into low water use planting beds and will need to be adjusted to avoid any infrastructure or obstacles, ex: hydrants, utility lines and covers, trench drains, street signs, etc. Existing trees may not be removed.
- The planting is laid out with a modular approach. Where a full module cannot be used, adjust plant counts accordingly (ex: when adjacent neighboring turf remains).
- The replacement of turfgrass in the tree lawn with plants is encouraged, mulch is intended solely as a ground cover material between plants. As plants mature less mulch will be needed.
- Plant and material selections are tailored to Colorado's Front Range in terms of local availability, climate resilience, water preservation and sustainability.
- Drawings and designs are intellectual property of LEAF Design Works with print release given to Sierra Ridge Metropolitan District.
- Call before you dig 811.
 It is free, it is easy and it is the law.
- Consult all applicable codes prior to beginning work to ensure compliance with all zoning, traffic, safety, fire, and building code. Note: No planting or landscaping may be higher than 24 inches if within a sight triangle. This applies to homes on a corner lot.
- The district may attach additional guidelines from time to time as required by Douglas County.
- For questions, contact your management company.

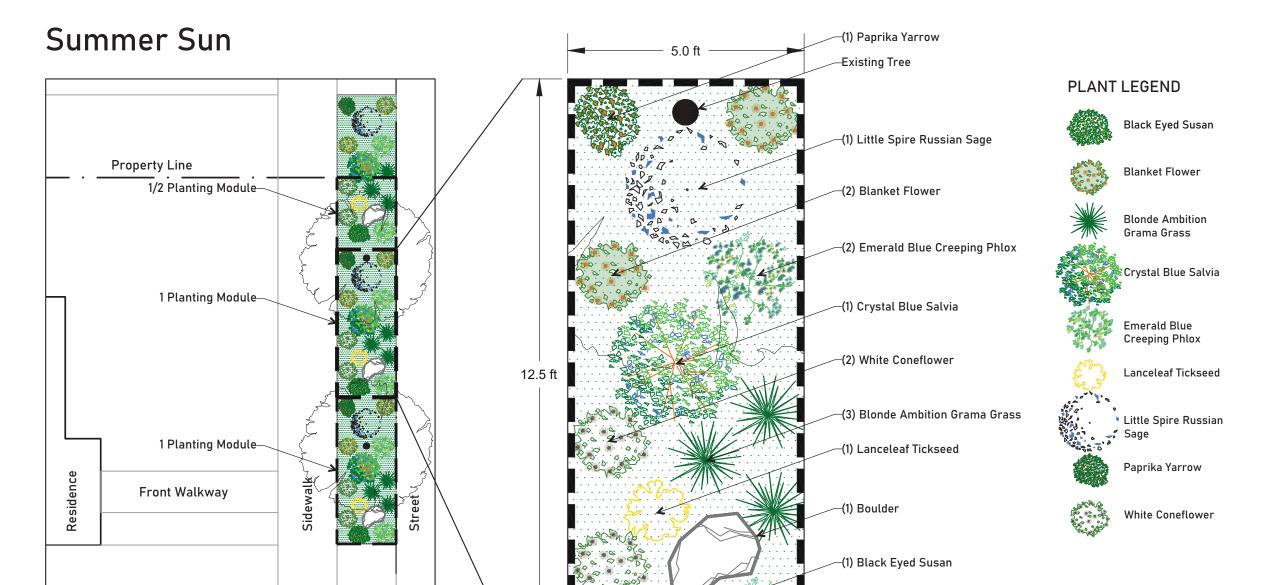


Example Garden: Summer Sun



Summer Sun

Full Sun



Scale: 1/2" = 1 ft

- Native and adapted plants that thrive in the Colorado heat will make for a colorful display during the summer months.
- Low water use is front and center of this plant design. Once the plants are established only very limited waterings are necessary to keep these plants thriving.
- Plants of this palette attract pollinators and provide habitat for small insects.
- Add in a rock or two for less maintenance, as well as added interest during the cold half of the year - think of a tall, tan grass next to a snowcapped boulder.

| Common Name | Scientific Name | Water Demand | Exposure | Install Size | Mature Size (Height x Spread) | Bloom | Bloom | Native |
|-----------------------------|---|-----------------|----------|-----------------|--|------------------|-----------------------------|--------|
| Black Eyed Susan | Rudbeckia fulgida 'Goldsturm' | Low | Full Sun | #1 | 18"x18" | Golden Yellow | Mid Summer | |
| Blanket Flower | Gaillardia aristata | Low | Full Sun | #1 | 18"x18" | Yellow/Red | Mid Summer | • |
| Blonde Ambition Grama Grass | Bouteloua gracilis 'Blonde Ambition' | Very Low | Full Sun | #1 | 30"x18" | Blonde | Summer to Fall | • |
| Crystal Blue Salvia | Salvia nemorosa 'Crystal Blue' | Low-Med | Full Sun | #1 | 18"x30" | Blue | Late Spring to Early Summer | |
| Emerald Blue Creeping Phlox | Phlox subulata 'Emerald Cushion Blue' | Low | Full Sun | 4" Pot | 6"x24" | Blue | Early Spring | |
| Lanceleaf Tickseed | Coreopsis lanceolata | Low | Full Sun | #1 | 18"x18" | Yellow | Early to Mid Summer | • |
| Little Spire Russian Sage | Perovskia atriplicifolia 'Little Spire' | Very Low | Full Sun | #1 | 30"x30" | Purple-Blue | Mid to Late Summer | |
| Paprika Yarrow | Achillea millefolium 'Paprika' | Low | Full Sun | #1 | 18"x18" | Brick Red/Yellow | Early to Late Summer | • |
| White Coneflower | Echinacea purpurea 'PowWow' White | Low | Full Sun | #1 | 30"x18" | White | Mid to Late Summer | • |

Driveway

Property Line

Scale: 1/8" = 1 ft

1/2 Planting Module-

Summer Sun Full Sun

Example Garden: Fall Fiesta



Fall Fiesta

Full Sun



(2) White Candytuft

(2) Native Verbena

-(1) Prairie Winecups

–(2) Yellow Coneflower

-(1) Prairie Dropseed

-(2) Autumn Joy Stonecrop

-(1) Gold & Bronze Tickseed

–(1) Coronado Red Hyssop

–(1) Boulder

-(2) Gardenview Scarlet Bee Balm

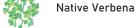
Existing Tree

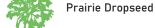












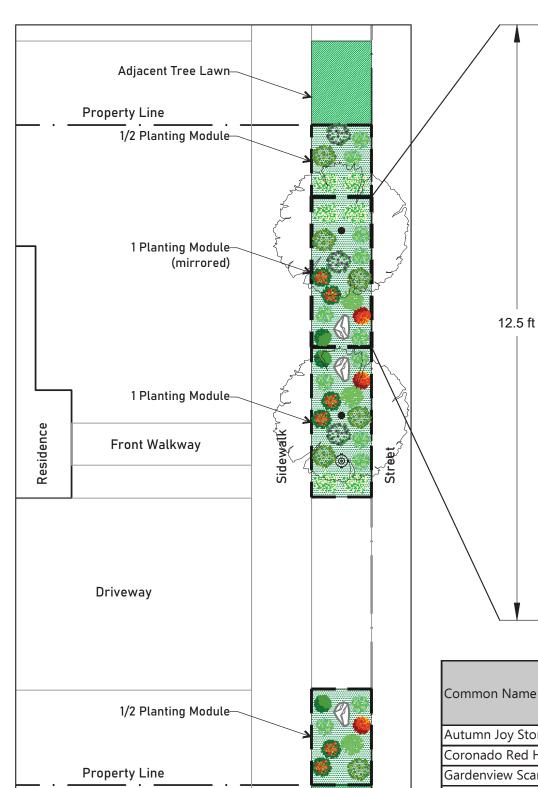




White Candytuft

Yellow Coneflower

- Focusing on the second half of the summer and the fall, this design highlights the yellows, oranges and reds as well as the golds, tans and browns for a warm and bright celebration of late-summer.
- Layering of plants provides variation of heights to give more depth to the landscape.
- Another low water use design focusing on the ever growing need to preserve water, while still wanting a lush and colorful range of plants.
- Boulders can be incorporated to add more interest and character, but also to further reduce maintenance needs.



Fall Fiesta

Scale: 1/2" = 1 ft

5.0 ft

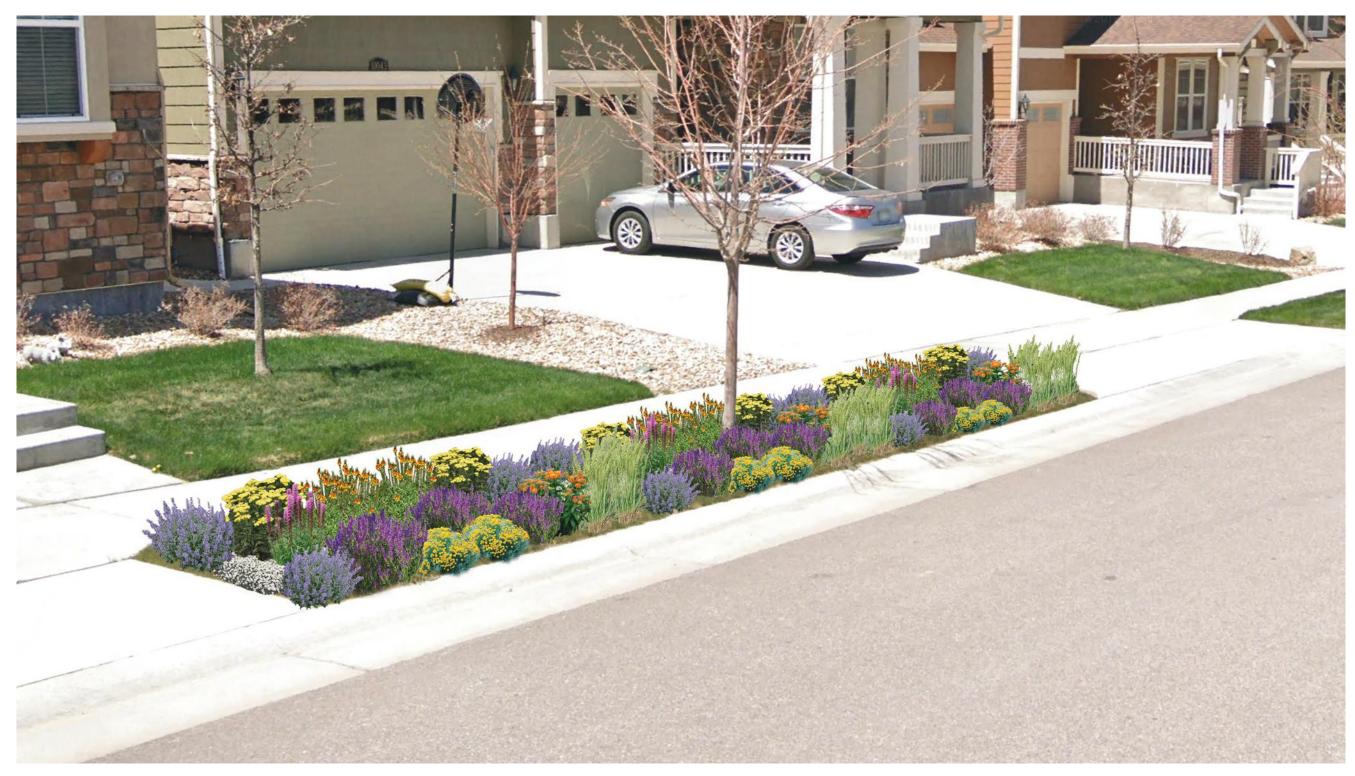
| Common Name | Scientific Name | Water | Exposure | Install Size | Mature Size (Height x Spread) | Bloom | Bloom | Native |
|-----------------------------|----------------------------------|----------|----------|-----------------|--|----------------------|-----------------------------|--------|
| Autumn Joy Stonecrop | Sedum 'Autumn Joy' | Low | Full Sun | #1 | 18"x15" | Salmon-Pink | Late Summer to Fall | |
| Coronado Red Hyssop | Agastache aurantiaca 'Pstessene' | Low | Full Sun | #1 | 18"x15" | Red | Mid Summer to Fall | |
| Gardenview Scarlet Bee Balm | Monarda 'Gardenview Scarlet' | Low-Med | Full Sun | #1 | 30"x18" | Scarlet | Mid Summer | |
| Gold & Bronze Tickseed | Coreopsis 'Uptick' | Low-Med | Full Sun | #1 | 18"x18" | Golden Yellow/Bronze | Summer to Fall | |
| Native Verbena | Verbena bipinnatifida | Low | Full Sun | 4" Pot | 6"x15" | Purple | Spring and Fall | • |
| Prairie Dropseed | Sporobolus heterolepis | Low | Full Sun | #1 | 24"x24" | Tan | Summer to Fall | • |
| Prairie Winecups | Callirhoe involucrata | Low | Full Sun | #1 | 9"x30" | Magenta | Early Summer to Fall | • |
| White Candytuft | Iberis sempervirens | Low | Full Sun | #1 | 9"x24" | White | Late Spring to Early Summer | |
| Yellow Coneflower | Ratibida pinnata | Very Low | Full Sun | #1 | 24"x24" | Yellow | Early to Late Summer | • |

Adjacent Tree Lawn-

Scale: 1/8" = 1 ft

Fall Fiesta
Full Sun

Example Garden: Pollinator Paradise



Pollinator Paradise

Full Sun

PLANT LEGEND



Butterfly Milkweed



(3) Prairie Junegrass

-(2) Moonshine Yarrow

-(1) Butterfly Milkweed

-(2) Lavender Cotton

—(1) Purple Gayfeather

–(3) Little Trudy Catmint

(3) Snow-in-Summer

-(2) Prairie Red Coneflower

-(3) Rocky Mountain Penstemon

Existing Tree

Lavender Cotton



Little Trudy Catmint



Prairie Red Coneflower



Moonshine Yarrow



Prairie Junegrass



Purple Gayfeather



Rocky Mountain Penstemon



Snow-In-Summer

- This plant design is centered around providing habitat for pollinators. Long flowering plants in a variety of bloom colors are the core of this mostly native mix.
- Varying heights and growth habits of the selected plants help create a diverse landscape, for both habitat and visual interest.
- A number of plants flower purple, a color known to attract bees.
- Low water use aligns with the vision for this project to not only reduce the number of waterings but also the amount per each round of irrigation.

| Driveway | | | Scale: 1/2" = 1 ft | | | | | | | | |
|----------------------|----------|------------|--------------------------|------------------------------------|---------|----------|---------|--|----------------|-----------------------------|--------|
| 1/2 Planting Module— | | | Common Name | Scientific Name | Water | Exposure | Install | Mature Size (Height x Spread) | Bloom | Bloom | Native |
| | 1 | | Butterfly Milkweed | Asclepias tuberosa | Low | Full Sun | #1 | 30"x24" | Orange | Mid to Late Summer | • |
| | | | Lavender Cotton | Santolina chamaecyparissus | Low | Full Sun | #1 | 15"x15" | Yellow | Mid Summer | |
| Property Line | | | Little Trudy Catmint | Nepeta x 'Little Trudy' | Low | Full Sun | #1 | 12"x18" | Lavender | Early to Late Summer | |
| | | η | Prairie Red Coneflower | Ratibidia columnifera pulcherrima | Low | Full Sun | #1 | 18"x24" | Yellow/Red | Early to Late Summer | • |
| | | 7 | Moonshine Yarrow | Achillea 'Moonshine' | Low | Full Sun | #1 | 24"x18" | Light Yellow | Early to Late Summer | |
| | | $\angle 2$ | Prairie Junegrass | Koeleria macrantha | Low-Med | Full Sun | #1 | 18"x12" | Purplish-Green | Early Summer | • |
| | | { | Purple Gayfeather | Liatris spicata 'Floristan Violet' | Low | Full Sun | #1 | 30"x24" | Violet-Purple | Early to Mid Summer | • |
| | | 4 | Rocky Mountain Penstemon | Penstemon strictus | Low | Full Sun | #1 | 18"x15" | Blue | Early to Mid Summer | • |
| ale: 1/8" = 1 ft | | | Snow-In-Summer | Cerastinum tomentosum | Low | Full Sun | 4" Pot | 9"x15" | White | Late Spring to Early Summer | |

Pollinator Paradise

1/2 Planting Module-

1 Planting Module-

1 Planting Module-

Front Walkway

12.5 ft

Property Line

Residence

Pollinator Paradise
Full Sun

Example Garden: High Plains Desert



High Plains Desert

PLANT LEGEND

Full Sun





Double Bubblemint

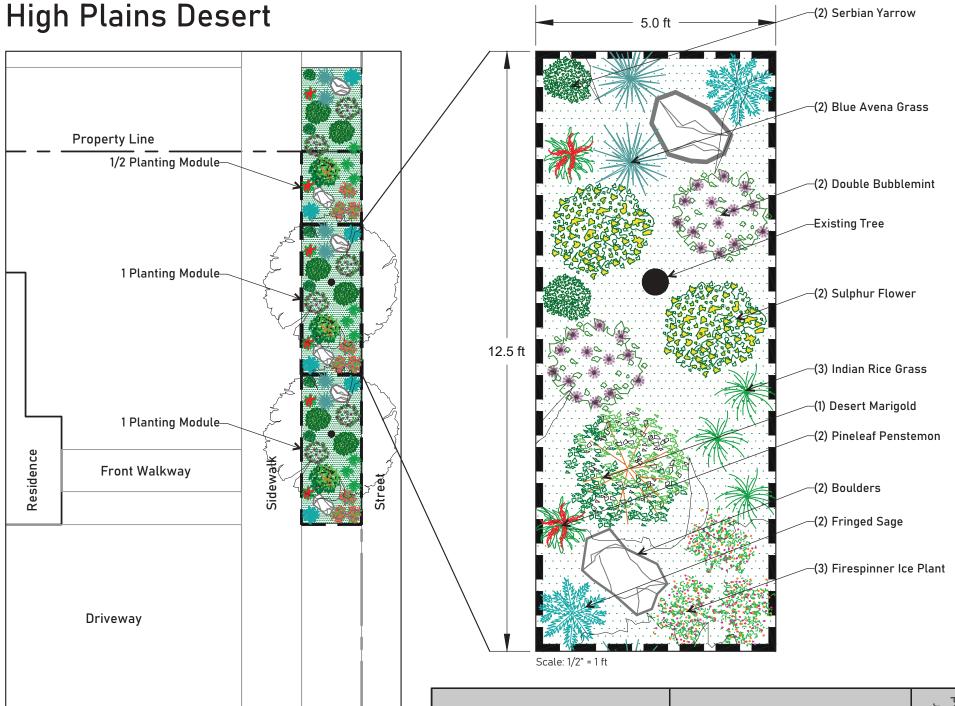
Indian Rice Grass

Pineleaf Penstemon



Sulphur Flower

- Taking a cue from the locale and the environment immediately around us, this design celebrates native plants.
- Leaning heavily into warm colors such as bright yellow, deep orange and pink.
- The first plants will flower in the spring, followed by some heat lovers in high-summer, while others will put on a show in the fall.
- A fully xeric plant palette, there won't be much need for irrigation beyond the establishment period or during periods of prolonged heat.



| Common Name | Scientific Name | Water | Exposure | Install | Mature Size (Height x Spread) | Bloom | Bloom | Native |
|-----------------------|-----------------------------|----------|----------|---------|--|---------------|-----------------------------|--------|
| Blue Avena Grass | Helictotrichon sempervirens | Low | Full Sun | #1 | 36"x18" | Buff | Late Spring | |
| Desert Marigold | Baileya multiradiata | Low | Full Sun | #1 | 18"x30" | Yellow | Late Spring to Early Fall | |
| Firespinner Ice Plant | Delosperma 'Fire Spinner' | Low | Full Sun | #1 | 12"x18" | Orange/Purple | Late Spring to Late Summer | |
| Fringed Sage | Artemisia frigida | Very Low | Full Sun | #1 | 12"x18" | Yellow | Late Summer | • |
| Double Bubblemint | Agastache cana | Low | Full Sun | #1 | 30"x24" | Rich Pink | Mid Summer to Fall | • |
| Indian Rice Grass | Achnatherum hymenoides | Low | Full Sun | #1 | 15"x15" | Tan | Mid Summer | • |
| Pineleaf Penstemon | Penstemon pinifolius | Low | Full Sun | #1 | 9"x12" | Scarlet | Mid Summer | • |
| Serbian Yarrow | Achillea serbica | Low | Full Sun | #1 | 9"x12" | White | Late Spring to Early Summer | |
| Sulphur Flower | Eriogonum umbellatum | Very Low | Full Sun | 4" Pot | 12"x24" | Yellow | Summer to Early Fall | • |

1/2 Planting Module-

Property Line

Scale: 1/8" = 1 ft

DESERT MARIGOLD SERBIAN YARROW FRINGED SAGE

High Plains Desert
Full Sun

Example Garden: Cool Breeze



Cool Breeze

Part Shade







(2) Heartleaf Foamflower

Blue Ensign Lungwort



Heartleaf Foamflower



Lady's Mantle



Spotted Dead Nettle



Tufted Hairgrass



White Creeping Phlox

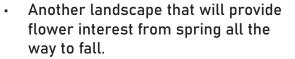


Wild Blue Flax

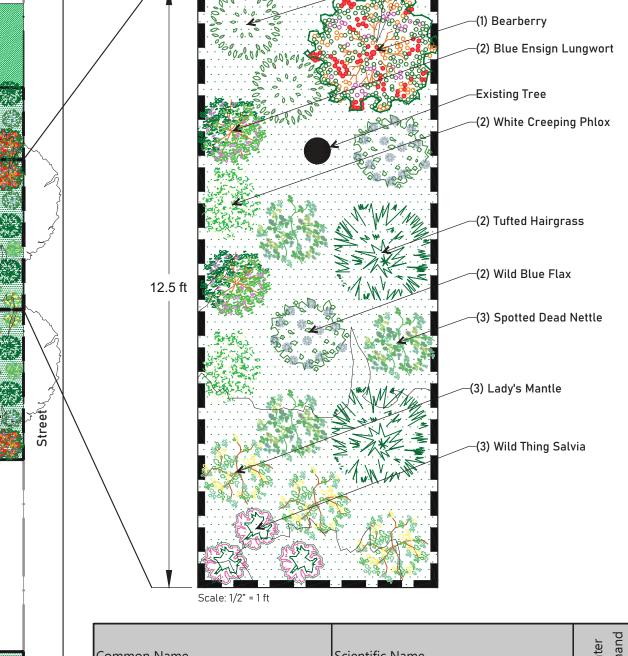
Wild Thing Salvia

 Ideal for north, northwest and northeast exposures, this part shade design utilizes plants with lots of foliage.

Native plants mixed with those adapted to the Front Range climate in subdued, cool colors that come in a variety of white and blue tones.



Slightly more water will be needed, due to the nature of these plants' ideal growing conditions.



| Common Name | Scientific Name | Water | Exposure | Install Size | Mature Size (Height x Spread) | Bloom | Bloom Time | Native |
|----------------------|----------------------------------|---------|------------|-----------------|--|-------------|-----------------------------|--------|
| Bearberry | Arctostaphylos uva-ursi | Low | Part Shade | #1 | 6"x36" | Soft Pink | Early Spring | • |
| Blue Ensign Lungwort | Pulmonaria 'Blue Ensign' | Low-Med | Part Shade | #1 | 12"x18" | Blue | Spring | |
| Heartleaf Foamflower | Tiarella cordifolia | Low-Med | Part Shade | #1 | 12"x18" | White/Pink | Late Spring to Late Summer | |
| Lady's Mantle | Alchemilla mollis 'Thriller' | Low | Part Shade | #1 | 18"x18" | Yellow | Spring to Summer | |
| Spotted Dead Nettle | Lamium maculatum 'Purple Dragon' | Low-Med | Part Shade | #1 | 6"x18" | Purple | Late Spring to Late Summer | |
| Tufted Hairgrass | Deschampsia cespitosa | Low-Med | Part Shade | #1 | 30"x24" | Shiny Black | Mid Summer | • |
| White Creeping Phlox | Phlox subulata 'White Delight' | Low | Part Shade | 4" Pot | 6"x15" | White | Early Spring | |
| Wild Blue Flax | Linum lewisii | Low | Part Shade | #1 | 18"x15" | Blue | Late Spring to Early Summer | • |
| Wild Thing Salvia | Salvia greggii 'Wild Thing' | Low | Part Shade | #1 | 18"x12" | Pink | Summer to Fall | • |

Cool Breeze

Property Line

Adjacent Tree Lawn-

1/2 Planting Module—

1 Planting Module-

1 Planting Module-

1/2 Planting Module-

Adjacent Tree Lawn-

Front Walkway

Driveway

Property Line

Scale: 1/8" = 1 ft

Sidewalk

Residence

(mirrored)

BLUE ENSIGN PULMONARIA

Cool Breeze
Part Shade

Example Garden: Summer Shade



Summer Shade

PLANT LEGEND

Part Shade



(2) White Nancy Nettle

-(4) False Forget-Me-Not

(2) Blazing Sunset Red Avens

(2) Fall Blooming Reed Grass

-(2) White Cloud Coral Bells

(2) Pink Whirling Butterflies

-(2) Petite Delight Bee Balm

(2) Boulders

(2) Bugleweed

Scale: 1/2" = 1 ft

(3) Cushion Spurge

Existing Tree

Blazing Sunset Red Avens



Bugleweed



Cushion Spurge



Fall Blooming Reed Grass



False Forget-Me-Not



Balm

Pink Whirling Butterflies

Petite Delight Bee

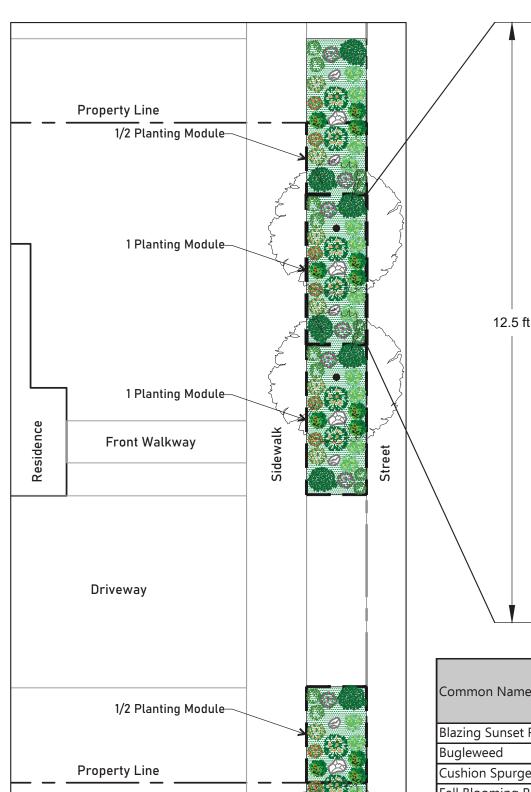


White Cloud Coral



White Nancy Nettle

- Part shade, especially during the hours of peak sunshine will make this water wise design thrive.
- Range of bloom colors spanning from cool to warm will ensure there is always something that catches the eye.
- Staggered flowering times provide interest throughout the seasons.
- Despite using the most water of the designs in this package, only a fraction of what a green lawn requires will be needed to keep this garden lush and thriving.



Summer Shade

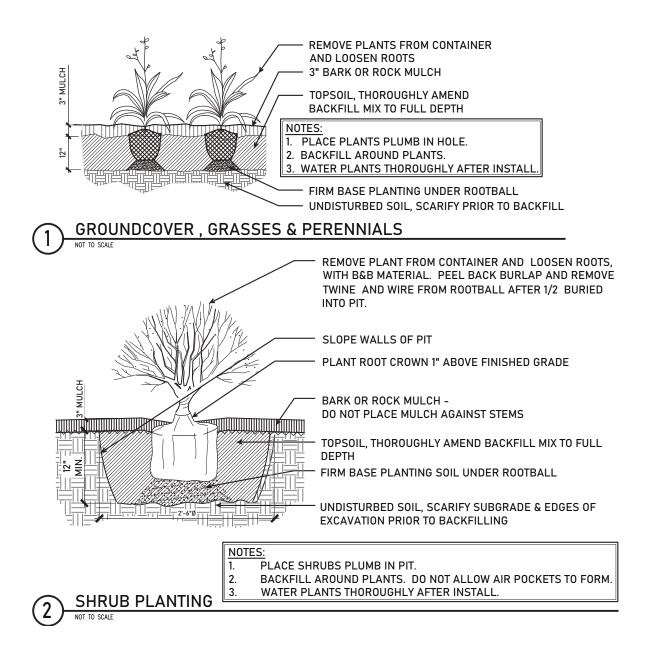
Exposure (Height > Spread) Common Name Scientific Name Blazing Sunset Red Avens Geum flora plena'Blazing Sunset' Part Shade 24"x15" Red Late Spring to Mid Summer Low Bugleweed Low-Med Part Shade 4" Pot 6"x12" Blue Late Spring to Early Summer Ajuga reptans 18"x18" Yellow Cushion Spurge Euphorbia polychroma Low Part Shade Spring to Early Summer #1 36"x24" Pinkish-Tan Fall Blooming Reed Grass Calamagrostis brachytricha Low-Med Part Shade Late Summer 15"x18" Blue Late Spring to Early Summer False Forget-Me-Not Brunnera macrophylla Low Part Shade Petite Delight Bee Balm Monarda 'Petite Delight' Low-Med Part Shade 12"x18" Lavender-Pink Mid Summer to Early Fall Pink Pink Whirling Butterflies #1 30"x30" Mid Summer to Fall Gaura lindheimeri 'Pink Cloud' Low Part Shade White Cloud Coral Bells #1 18"x18" Heuchera sanguinea 'White Cloud' Low-Med Part Shade White Summer 9"x15" White White Nancy Nettle Lamium maculatum 'White Nancy Low-Med | Part Shade Late Spring to Summer

Scale: 1/8" = 1 ft

FALL BLOOMING REED GRASS

Summer Shade
Part Shade

Planting Specifications



PLANTING NOTES

- Protect existing trees.
- Planting is subject to weather and plant availability.
- Planting window for shrubs, perennials, grasses & groundcovers is generally between May 15 and October 15, weather pending.
- See above planting details for installation.
- Plants have increased watering needs during establishment period (1-3 growing seasons).

Property Line Route Irrigation around-**Boulders & Trees** 1/2" Drip Tubing-Valve Box, connect toexisting Irrgation System esidence Sidewalk Front Walkway Driveway 1/2" Drip Tubing-**Property Line**

Irrigation Diagram

IRRIGATION LEGEND

_____ 1/2" Drip Tubing

(V) Valve Box

IRRIGATION NOTES

- Call before you dig 811.
- Soaker line drip tubing to be 1/2" diameter, brown or black polyethylene (PE), 12" emitter spacing, 1 gallon per hour (GPH).
- Alternatively, emitter drip tubing to be 1" mainline, with 1/2 GPH pressure compensating emitters.
- Drip tubing lines to be spaced 18" apart.
- Route tubing around obstacles: trees, boulders, fire hydrant, street signs, etc.
- Separate drip zone from lawn (spray) irrigation.
- Only modify zones within existing irrigation system and controller.
- Use 10" round valve box, green cover to house drip valve.
- Contractor or homeowner to verify pressure of irrigation system prior to drip line installation.

Material Specifications

WOOD MULCH

Natural colored wood mulch helps increase water infiltration, retain soil moisture reduces evaporation, and offers a protective layer against temperature extremes. extremes. To prevent mulch from washing out of the tree lawn and into storm drains wood mulch may **only** be used as a 4-6 inch ring around plants and not within 2 feet of the property line. The grade at that point should not be altered.

Cascade Cedar Mulch

- hair-like fibers weave together helping the mulch stay in place
- maintains color
- install as 3" layer over top soil



Small/Medium Pine Bark Mulch

- helps prevent soil erosion
- small .75-1.5" or medium 1-3" sizes approved
- not recommended for areas with high winds
- install as 3" layer over top soil



Redwood Mulch

- mats together through its fibrous structure
- decorative, color fades slowly
- install as 3" layer over top soil



ROCK MULCH

Colored rock mulches provide options when rock is aesthetically desired over wood mulch, or in areas with slopes, heavy drainage flows, or high winds. Ensure to use rock where there is concentrated water flow such as property lines. Do not alter the land grade.

The approved types of rock represent locally available material while building upon the existing color palette of the Sierra Ridge neighborhoods.

You may choose from the below palette OR rocks with similar coloration and size to your existing

front yard landscaping rock.

Local River Rock

- round granite or gneiss river rock
- tan colored
- approved size 1-2"
- install as 3" layer over top soil



OCAL RIVER ROCK MULCH 1-2"

Grey Granite Rock

- angular granite chips
- grey colored
- approved size 1/2-2"
- install as 3" layer over top soil



Colorado Red Rock

- angular sandstone chips
- red colored
- approved size 1/2-2"
- install as 3" layer over top soil



Material Specifications

BOULDERS

Locally or regionally sourced and readily available boulder options allow for integration to enhance the curbside landscape throughout the seasons.

Boulders shall not exceed 30" in height, must be in compliance with all applicable local and county code regarding sight-triangles (at least 6 feet from the corner), and must not block any emergency infrastructure such as fire hydrants, etc. Boulders need to be a minimum of 24" from the face of the curb.

Grey Granite Boulder

- quarried in Clear Creek County, CO
- crisp edges
- grey granite with black and white marbling
- bury at 1/3 of rock at a minimum



Colorado Red Sandstone Boulder

- quarried in Boulder County, CO
- crisp edges
- red with white and tan marbling
- bury at 1/3 of rock at a minimum



ORADO RED SANDSTONE BOULD!

Colorado Buff Sandstone Boulder

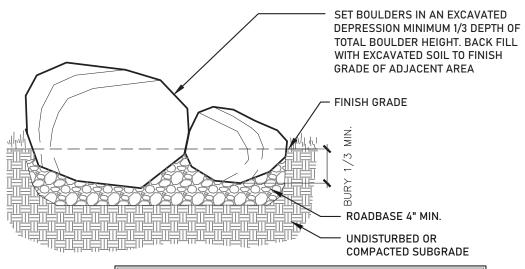
- quarried in Larimer County, CO
- crisp edges
- boulders contain a mix of grey, cream, tan and gold colors
- bury at 1/3 of rock at a minimum



Moss Granite Boulder

- harvested in Carbon County, WY
- round edges
- orange with lichen and small moss on surface
- bury at 1/3 of rock at a minimum





- BOULDERS SHALL NOT EXCEED 30" IN HEIGHT.
- MAINTAIN 5 FT DISTANCE FROM DRIVEWAY EDGE.
- BOULDERS SHALL NOT BE LOCATED WITHIN 10 FT OF A HYDRANT.

Material Specifications

LANDSCAPE EDGING

Metal edging provides a durable, cost effective way to permanently separate different ground covers / landscape materials, helping reduce maintenance needs.

Powder-coated edging is available in various colors, ensuring a perfect match with the surrounding color palette.

Galvanized Rolled-top Steel Edging

- rolled top adds rigidity
- silvery-grey color
- cost effective
- install per manufacturer specifications

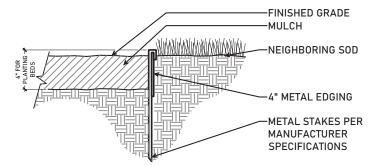


GALVANIZED ROLLED-TOP STEEL EDGING

Powder Coated Steel Edging

- interlocking for additional stability
- green, black or brown colors approved
- more durable than rolled-top edging
- install per manufacturer specifications







Disclaimer

This document and plans within have been prepared as an illustrative guideline, and do not reflect the accurate or complete location of utilities, hydrants, or existing trees. Locate all utilities prior to beginning work.

Homeowner must adhere to all applicable code.

All landscape improvements must be submitted and approved by the District's Architectural Review Committee prior to installation.



Sierra Ridge Metropolitan District Douglas County, Colorado, United States



Elena Arnosky 2741 14th St, Apt B Boulder, CO 80304 T: 512.913.5365

E: studio@leafdesignworks.com

W: leafdesignworks.com