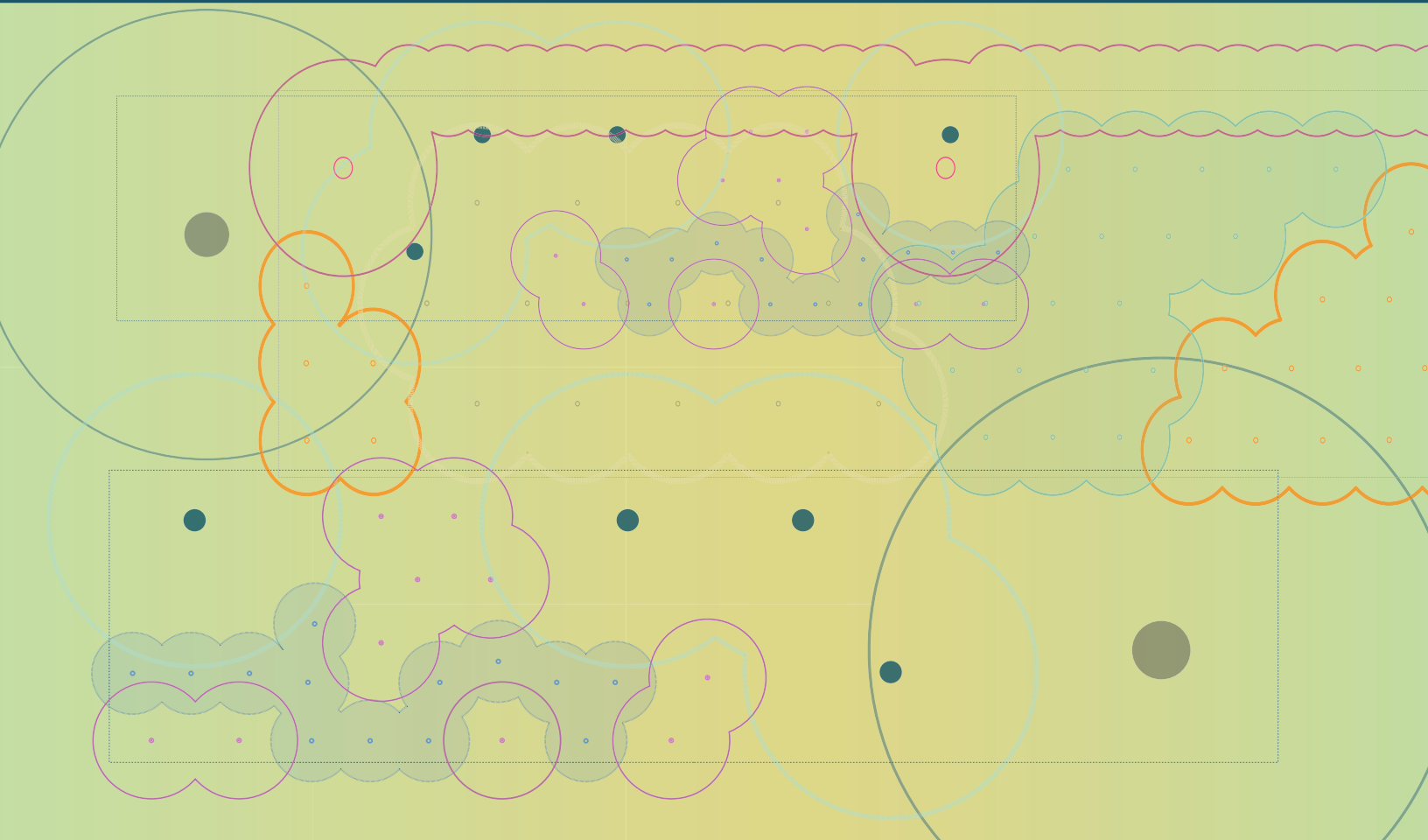




NC COASTAL LANDSCAPING DESIGNS

NATIVE PLANTING TEMPLATES FROM THE COASTAL LANDSCAPES INITIATIVE



This resource was produced by the Coastal Landscapes Initiative, or CLI, a collaborative effort to address landscaping at every stage of the process, from planning and design to installation and management. Partners come from the public and private sectors, drawing upon a range of North Carolina expertise. The ultimate goal of the CLI is to foster coastal landscapes that are attractive, desirable, functional, manageable and environmentally friendly. Learn more at go.ncsu.edu/CoastalLandscapes.



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SELECTING PLANTS

- Check botanical (scientific) names to make sure you are purchasing the correct plants.
- Larger, more mature plants have immediate visual impact in the landscape and typically have more developed root systems. Purchase the largest plants that fit your budget.
- Flowering perennials and grasses may take two growing seasons to reach maturity, while shrubs could take several years. Trees will take even longer.
- Look for trees with a pot size of 7 to 15 gallons and shrubs of 3 to 5 gallons.
- Perennials and grasses typically come in quart, gallon and occasionally 3-gallon sizes. Plug plants may also be an option but will take longer to fill in and may need more care the first year than larger plants.
- When buying perennials in large quantities, smaller 4-inch pots or 2-inch plugs are more affordable. Note that plugs planted in sandy and dry soils will require intensive watering during establishment. For cost savings, consider purchasing fewer plants and dividing them in subsequent years.
- Plan ahead to find plants through your local nursery or other sources so you have them when you are ready to plant.

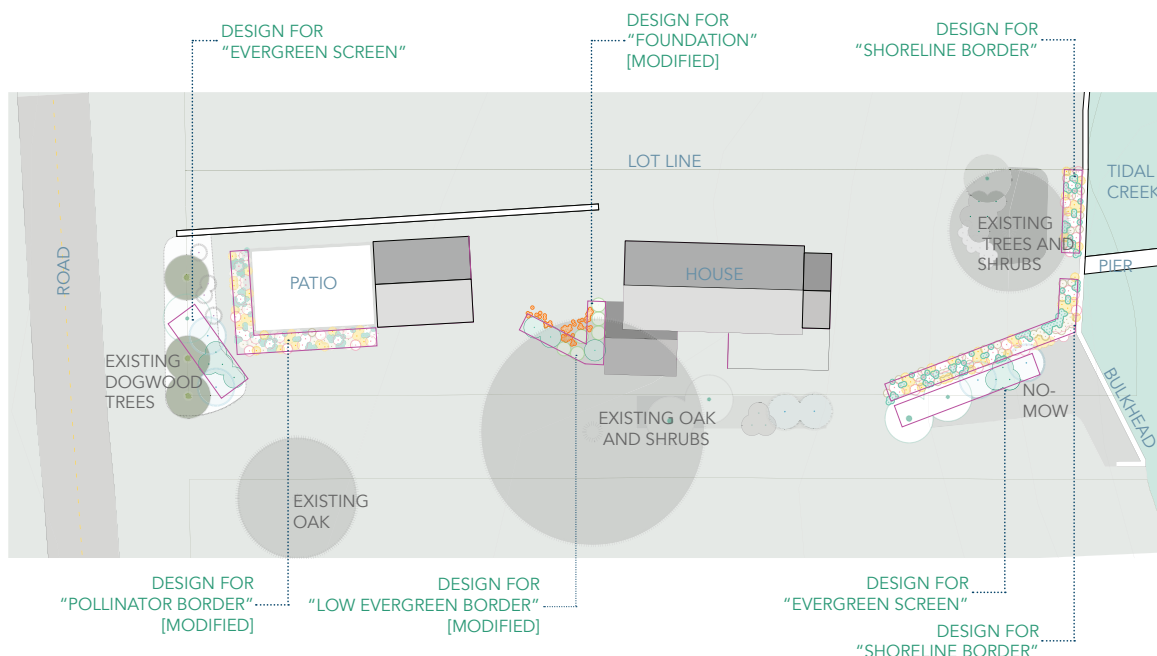
GENERAL MAINTENANCE TIPS

- During the first year, ensure that all plants receive adequate moisture from rainfall or supplemental watering. Most plants require 1 inch of water per week. A thorough soaking is more effective than frequent sprinkling. On dry sites, new plants may require watering several times per week.
- Mulch between plants to conserve water and control weeds. About 2 inches is a sufficient amount.
- To encourage reseeding of perennials, remove or thin out mulch around these plants in the autumn.
- Use nonintensive maintenance techniques to increase wildlife habitat value:
 - Tolerate some level of insect damage. Don't use pesticides.
 - Leave dead stems from perennials standing as shelter for pollinators and birds until spring. At that time, cut back by hand or with a string trimmer to 4 to 6 inches.
- Plant between October and early April for optimal success. Plant grasses in the spring.

Sample Landscape

This example layout shows how the templates might be adapted to a 0.4-acre residential lot. The plantings by the road and parallel to the house screen out unwanted views. Along the patio, a pollinator border adds beauty and wildlife value. A low, evergreen border and foundation plantings at the end of the house provide year-round

green foliage, direct foot traffic and absorb stormwater. The shoreline border helps stabilize the ground and provides a clean edge behind land that should be mowed only twice a year. This "no-mow" area minimizes landscaping installation and maintenance costs, provides important wildlife habitat and stores a variety of seeds.



SCREENING WITH TREES

FOR SUNNY, MOIST AREAS

SUN: ☀️
 SOIL MOISTURE: 💧
 SEASONAL COLOR: MAY-NOV



DESCRIPTION

This semi-evergreen tree border can increase privacy or block an unsightly view. Sweetbay magnolia trees have a moderate growth rate. While trees are young, the flowers will get plenty of sun to bloom, attracting pollinators and other beneficial insects. Birds will use the trees for cover and will forage on flower seeds. Magnolias also serve as a host plant for the eastern tiger swallowtail butterfly.

Be aware that tree branches will extend beyond the 5-foot by 20-foot planting area. Suggested spacing allows for branch overlap that provides screening. Avoid sites with overhead power lines for this plan, or use much shorter trees if lines are present.

ALTERNATIVE

Use a variety of trees and adjust for differences in plant spread.

Tree substitutes: fast-growing, evergreen red cedar (*Juniperus virginiana*); moderate-growing, evergreen yaupon holly (*Ilex vomitoria*) or American holly (*Ilex opaca*).

Perennial substitutes: shade-tolerant river oats (*Chasmanthium latifolium*); dotted horsemint or spotted beebalm (*Monarda punctata*); sand coreopsis (*Coreopsis lanceolata*).

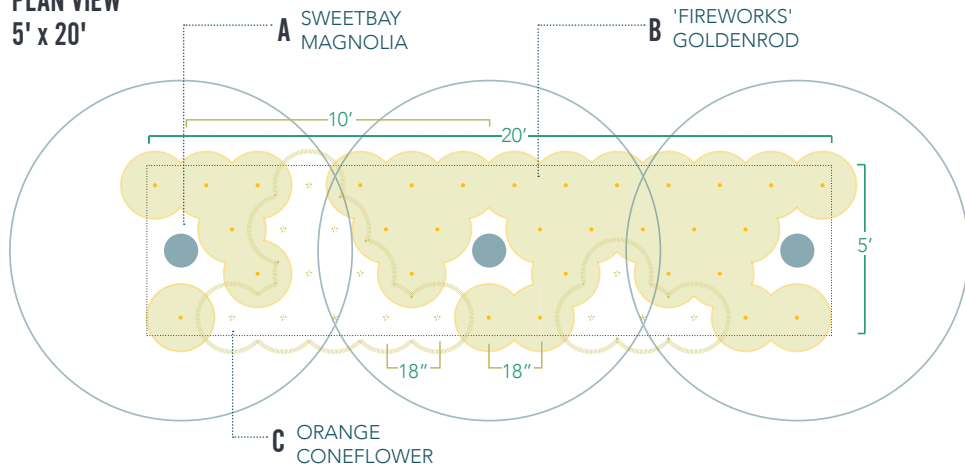
MAINTENANCE

When trees mature, their shade can cause perennial flowers to decrease in number. If this happens, you can apply a hardwood mulch to conserve water and prevent weeds in the area or install shade-tolerant plants. If adding plants, consider using plugs or seeds to avoid damaging tree roots.



PLAN VIEW

5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																
						J	F	M	A	M	J	J	A	S	O	N	D					
A	3	Sweetbay magnolia	Magnolia virginiana	TREE	10' O.C.																	
B	31	'Fireworks' goldenrod	Solidago rugosa 'Fireworks'	PERENNIAL	18" O.C.																	
C	14	Orange coneflower	Rudbeckia fulgida	PERENNIAL	18" O.C.																	

SCREENING: HIGH AND LOW

FOR SUNNY, MOIST AREAS

SUN: ☀️ ☂️
 WATER: 💧
 SEASONAL COLOR: APR-OCT



DESCRIPTION

The semi-evergreen sweetbay magnolia and evergreen inkberry used in this design help increase privacy near the home or block unwanted views for most of the year. The combination of taller and shorter plants provides a wide range of habitat for wildlife in a small footprint, while the perennials offer seasonal color as well as nectar for insects. Suggested spacing allows for branch overlap when plants are mature.

Sweetbay magnolia has a moderate growth rate. Inkberry grows slowly.

ALTERNATIVE

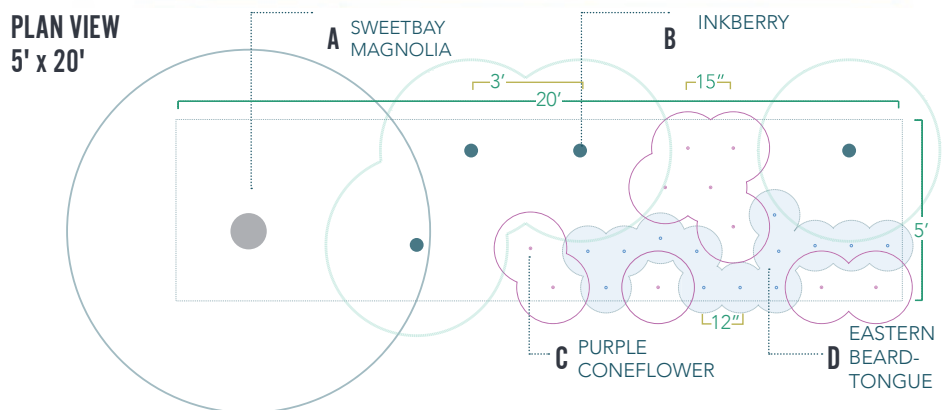
Tree substitutes: fast-growing, evergreen eastern red cedar (*Juniperus virginiana*); moderate-growing, salt-tolerant, evergreen yaupon holly (*Ilex vomitoria*) or American holly (*Ilex opaca*). A taller shrub such as wax myrtle (*Morella cerifera*) could also be used.

Shrub substitutes: dwarf palmetto (*Sabal minor*) or the eco-regional anise shrub (*Illicium parviflorum*).

Perennial substitutes: For coneflower, try butterfly weed (*Asclepias tuberosa*) or spring-blooming sand coreopsis (*Coreopsis lanceolata*). In place of beardtongue, try blazing star (*Liatis sp.*).

MAINTENANCE

If needed, prune inkberry in late winter to remove dead wood or to rejuvenate.



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																
						J	F	M	A	M	J	J	A	S	O	N	D					
A	1	Sweetbay magnolia	Magnolia virginiana	TREE	10' O.C.																	
B	4	Inkberry	Ilex glabra	SHRUB	3' O.C.																	
C	10	Purple coneflower	Echinacea purpurea	PERENNIAL	15" O.C.																	
D	13	Eastern smooth beardtongue	Penstemon laevigatus	PERENNIAL	12" O.C.																	

EVERGREEN SCREEN

FOR DRY AREAS WITH SUN TO PART-SHADE

SUN: 

WATER: 

SEASONAL COLOR: OCT-FEB



DESCRIPTION

The dense, bushy habit of these large shrubs provides separation and privacy, making this screening garden ideal for along roads or between houses. When placing this design, avoid blocking long views of the landscape for you and your neighbors.

Wax myrtle has a fast growth rate, yaupon has a moderate rate and inkberry grows slowly.

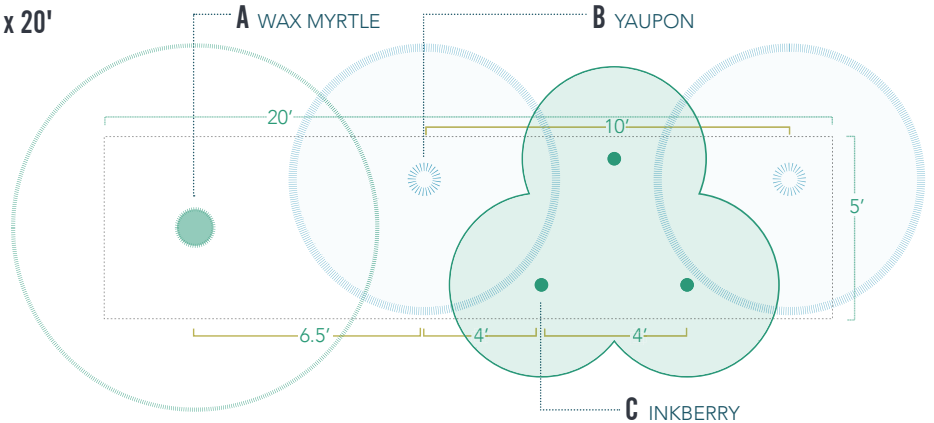
ALTERNATIVE

The eco-regional anise shrub (*Illicium parviflorum*) is an additional shrub option. If you prefer less height, dwarf varieties also are available for most plants in this design. Dwarf palmetto (*Sabal minor*) would be appropriate for drier sites.

MAINTENANCE

If needed, prune shrubs in late autumn or winter.

PLAN VIEW 5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																
						J	F	M	A	M	J	J	A	S	O	N	D					
A	1	Wax myrtle	<i>Morella cerifera</i>	SHRUB	6.5' O.C. TO YAUPON																	
B	2	Yaupon	<i>Ilex vomitoria</i>	SHRUB	10' O.C.																	
C	3	Inkberry	<i>Ilex glabra</i>	SHRUB	4' O.C.																	

BIRD-FRIENDLY SCREEN

FOR DRY TO MOIST AREAS WITH SUN TO PART-SHADE

SUN: ☀️ ☁️

SOIL MOISTURE: 💧 – 💧💧

SEASONAL COLOR: MAY-DEC



DESCRIPTION

All plants in this design attract birds to the yard. Wax myrtle, inkberry and beautyberry produce abundant berries in late summer and autumn that are irresistible to birds and other backyard wildlife. Many birds also eat the seeds of the orange coneflower.

This design provides a screen to increase privacy or block unwanted views. It also creates a stand-alone garden area for observing wildlife. Only female plants of wax myrtle and inkberry produce berries, so try to select a female plant at the nursery and ensure there are male plants nearby for pollination (in a neighbor's yard or a natural area). This approach is also true for the alternates below.

Wax myrtle and beautyberry are fast-growing while inkberry is slow-growing.

ALTERNATIVE

All of these plants should be readily available. If you need less height, dwarf varieties exist for most of the shrubs.

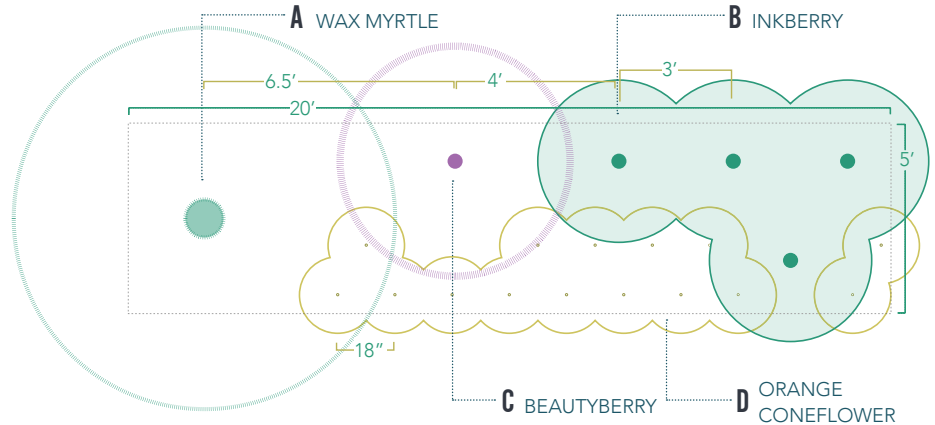
Shrub substitutes: For wax myrtle, try yaupon holly (*Ilex vomitoria*). For beautyberry, choose winterberry holly (*Ilex verticillata*) or red chokeberry (*Aronia arbutifolia*). For inkberry, try dwarf palmetto (*Sabal minor*) or deciduous coralberry (*Symphoricarpos orbiculatus*).

MAINTENANCE

If needed, shrubs can be pruned in late autumn or winter. Beautyberry can be pruned more than other shrubs if a smaller size is desired, but it also thrives if left to grow. Wax myrtle recovers quickly from minor storm damage, but broken branches or damaged bark should be removed.



PLAN VIEW 5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																	
						J	F	M	A	M	J	J	A	S	O	N	D						
A	1	Wax myrtle	<i>Morella cerifera</i>	SHRUB	6.5' O.C. TO INKBERRY																		
B	4	Inkberry	<i>Ilex glabra</i>	SHRUB	6.5' O.C.																		
C	1	American beautyberry	<i>Callicarpa americana</i>	SHRUB	3' O.C. TO WAX MYRTLE																		
D	15	Orange coneflower	<i>Rudbeckia fuligida</i>	PERENNIAL	18" O.C.																		

SCREENING WITH VINES

FOR SUNNY, DRY AREAS

SUN: ☀️
 WATER: 💧
 SEASONAL COLOR: MAR-OCT



Crossvine



Orange coneflower



Butterfly weed



Spotted horsemint



ELEVATION VIEW

DESCRIPTION

Crossvine will create a dense, evergreen screen along an existing fence or a new trellis. This vine can grow up to 15 feet, so a sturdy structure is needed to hold its weight.

Flowers in this design will attract and provide food for pollinators. Butterfly weed is an important food source for monarch butterfly caterpillars. Spotted horsemint and orange coneflower attract a wide variety of birds, butterflies, bees and other beneficial insects. These perennials may self-seed in favorable growing conditions, so it is OK to start out with fewer plants than suggested and see if they naturally spread.

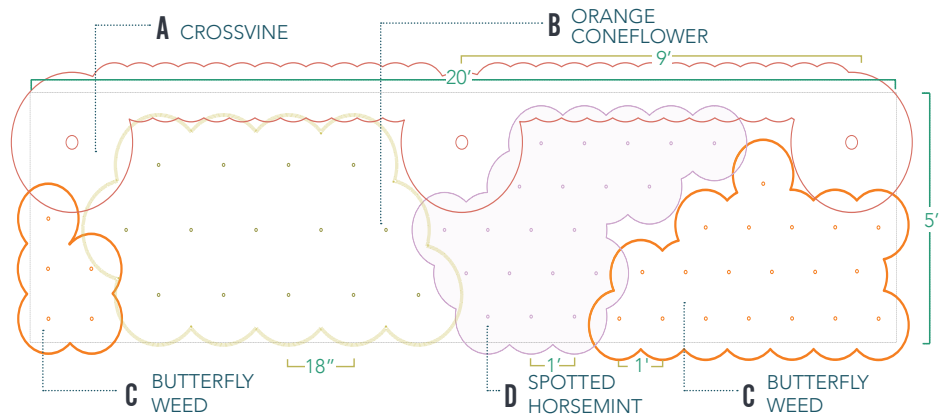
ALTERNATIVE

Vine substitutes: Carolina jessamine (*Gelsemium sempervirens*) or the less densely growing coral honeysuckle (*Lonicera sempervirens*).

Perennial substitutes: For spotted horsemint, you can substitute eastern smooth beardtongue (*Penstemon laevigatus*). Grasses like switchgrass (*Panicum virgatum*), little bluestem (*Schizachyrium scoparium*) or muhly grass (*Muhlenbergia capillaris*) can also be used. Placing these plants in the back of

PLAN VIEW

5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																
						J	F	M	A	M	J	J	A	S	O	N	D					
A	3	Crossvine	<i>Bigonia capreolata</i>	VINE	9' O.C.																	
B	16	Orange coneflower	<i>Rudbeckia fulgida</i>	PERENNIAL	18" O.C.																	
C	24	Butterfly weed	<i>Asclepias tuberosa</i>	PERENNIAL	1' O.C.																	
D	20	Spotted horsemint	<i>Monarda punctata</i>	PERENNIAL	1' O.C.																	

the bed between the vines would add dimension.

MAINTENANCE

Tidy the vines up with minor pruning in the winter, but don't cut them all the way back.

POLLINATOR-FRIENDLY BORDER

FOR SUNNY AREAS WITH DRY TO MOIST SOIL

SUN: ☀️☔️

SOIL MOISTURE: 💧-💧💧

SEASONAL COLOR: APR-DEC



Sweet pepperbush



Butterfly weed



Blue wild indigo



Purple coneflower



Pink muhly grass



ELEVATION VIEW

DESCRIPTION

The combination of flowering perennials, native ornamental grass and shrubs add year-round interest with texture and color. This design also provides important foraging grounds and habitat for birds, bees and butterflies. Butterfly weed (or milkweed) is a host plant for monarch butterflies. It also readily seeds, so patient gardeners can plant less, letting it naturally colonize over time. If exposure to salt spray is a concern, search for more salt-tolerant plants.

ALTERNATIVE

Shrub substitutes: For dry soils, Adam's needle (*Yucca filamentosa*) is a good choice. Otherwise, opt for inkberry (*Ilex glabra*).

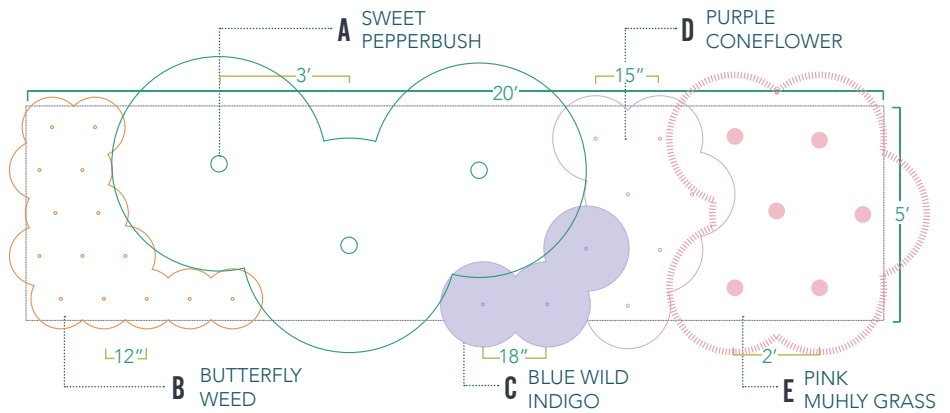
Perennial substitutes: eastern smooth beardtongue (*Penstemon laevigatus*), sand coreopsis (*Coreopsis lanceolata*) or more butterfly weed. Also, add a tall (6-foot) semi-evergreen bush like zenobia (*Zenobia pulverulanta*) on the back of the border for year-round structure.

MAINTENANCE

Prune clethra in winter or early spring, if needed. Cut back grasses in late winter or early spring. Leave an 8-to-12-inch crown on muhly grass.

PLAN VIEW

5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																
						J	F	M	A	M	J	J	A	S	O	N	D					
A	3	Sweet pepperbush	<i>Clethra alnifolia</i>	SHRUB	3' O.C.																	
B	14	Butterfly weed	<i>Asclepias tuberosa</i>	PERENNIAL	12" O.C.																	
C	3	Blue wild indigo	<i>Baptisia australis</i>	PERENNIAL	18" O.C.																	
D	6	Purple coneflower	<i>Echinacea purpurea</i>	PERENNIAL	15" O.C.																	
E	6	Muhly grass	<i>Muhlenbergia capillaris</i>	GRASS	2' O.C.																	

FOUNDATION

FOR DRY AREAS WITH SUN TO PART-SHADE

SUN: ☀️ ☁️
 SOIL MOISTURE: 💧
 SEASONAL COLOR: AUG-FEB



DESCRIPTION

This design can be used for a foundation planting, stand-alone bed or as a border along a road, driveway, walkway or patio. The number of coastal N.C. native plants that thrive in the dry, hot conditions around a building's foundation is limited, but the species in this design should be suitable for most buildings that have rain gutters. In addition, these plants produce pollinator-friendly flowers and berries that will attract birds to your yard. The evergreen inkberry and dwarf yaupon are slow-growing. As they mature, they will improve building energy efficiency.

ALTERNATIVE

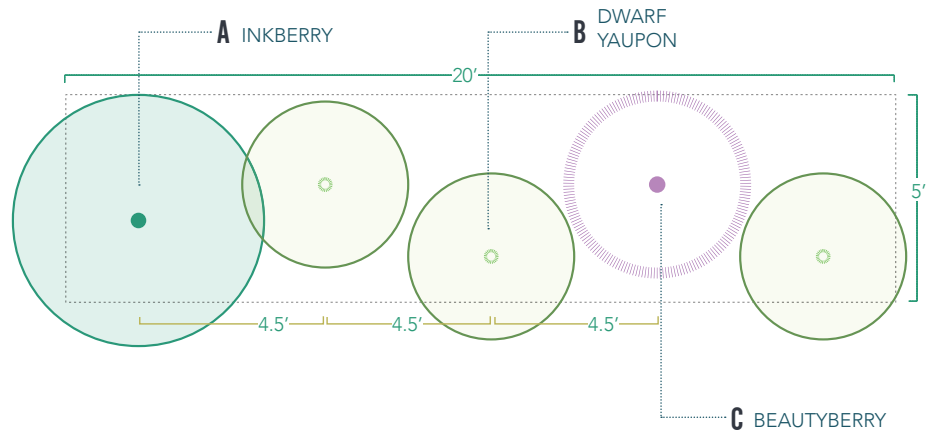
Dwarf palmetto (*Sabal minor*) is a great substitute for the deciduous beautyberry, if you prefer different leaves and an evergreen plant.

You also can plant lower-growing perennials, like orange coneflower (*Rudbeckia fulgida* 'Goldsturm'), at the front of the border.

MAINTENANCE

Prune shrubs in late winter as needed.

PLAN VIEW 5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																
						J	F	M	A	M	J	J	A	S	O	N	D					
A	1	Inkberry	<i>Ilex glabra</i>	SHRUB	4.5' O.C. TO YAUPON																	
B	3	Dwarf yaupon	<i>Ilex vomitoria</i> 'Nana'	SHRUB	4.5' O.C.																	
C	1	American beautyberry	<i>Callicarpa americana</i>	SHRUB	4.5' O.C. TO YAUPON																	

LOW EVERGREEN BORDER

FOR DRY TO MOIST AREAS WITH SUN TO PART-SHADE

SUN: ☀️ ☁️

SOIL MOISTURE: 💧 – 💧💧

SEASONAL COLOR: SEPT-FEB



DESCRIPTION

This design affords an open view and is fitting as a border along a driveway, front sidewalk or walkway to the front door. Dwarf yaupon holly's compact habit lends a refined and formal feel, while the pink feathery texture of muhly grass adds whimsy. Inkberry and dwarf yaupon have slow growth rates.

ALTERNATIVE

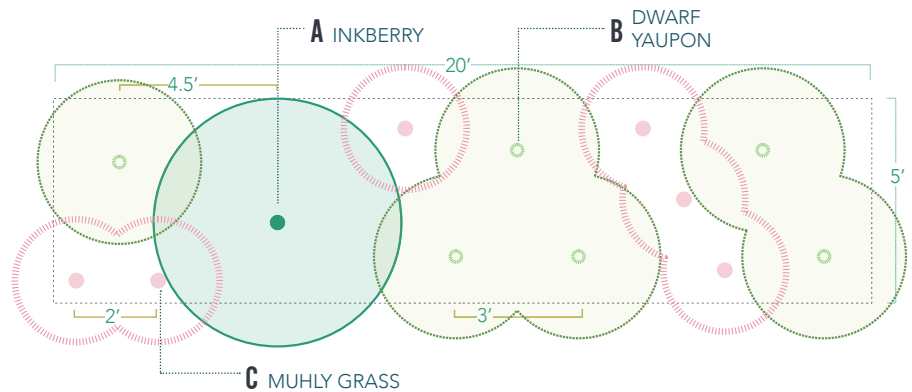
Grass substitutes: switchgrass (*Panicum virgatum*), Elliott's lovegrass (*Eragrostis elliottii*) or little bluestem (*Schizachyrium scoparium*).

MAINTENANCE

To achieve the most ecologically beneficial garden, wait until late winter or early spring to cut back grasses. Leave an 8-to-12-inch crown on muhly grass.

PLAN VIEW

5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR																	
						J	F	M	A	M	J	J	A	S	O	N	D						
A	1	Inkberry	<i>Ilex glabra</i>	SHRUB	4.5' O.C. TO YAUPON																		
B	6	Dwarf yaupon	<i>Ilex vomitoria</i> 'Nana'	SHRUB	3' O.C.																		
C	6	Muhly grass	<i>Muhlenbergia capillaris</i>	GRASS	2' O.C.																		

FILTER STRIP

FOR SUNNY AREAS WITH DRY TO MOIST SOIL

SUN: ☀️ ☂️
 SOIL MOISTURE: 💧 – 💧
 SEASONAL COLOR: SPRING & FALL



Switchgrass



Pink muhly grass



Sand coreopsis



ELEVATION VIEW

DESCRIPTION

This simple, naturalistic design works well along roads, driveways, ditches, swales, pond shores or bulkheads. The plants filter out sediment, nutrients and other pollutants from stormwater and also attract native pollinators and birds.

ALTERNATIVE

Grass substitutes: Elliott's lovegrass (*Eragrostis elliottii*) and the perennial goldenrod cultivar *Solidago rugosa* 'Fireworks,' which blooms in autumn.

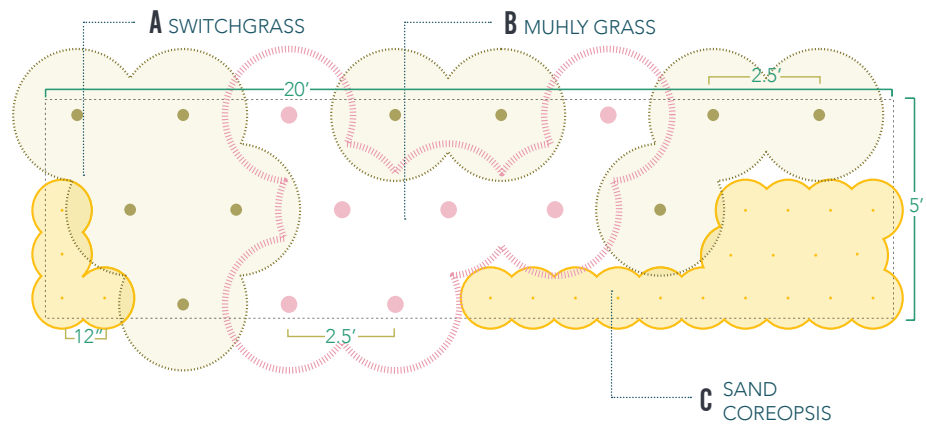
Perennial substitutes: For autumn interest and pollinator support, use calico aster (*Symphotrichum lateriflorum*) and *Solidago rugosa* 'Fireworks.'

For early season color, use blue wild indigo (*Baptisia australis*) or bluestar (*Amsonia tabernaemontana*).

MAINTENANCE

Cut back grasses in late winter or early March. Leave an 8-to-12-inch crown on the muhly grass.

PLAN VIEW 5' x 20'



PLANT SELECTION

KEY	QTY	COMMON NAME	BOTANICAL NAME	PLANT TYPE	SPACING	SEASONAL COLOR														
						J	F	M	A	M	J	J	A	S	O	N	D			
A	10	Switchgrass	<i>Panicum virgatum</i>	GRASS	2.5' O.C.															
B	7	Muhly grass	<i>Muhlenbergia capillaris</i>	GRASS	2.5' O.C.															
C	22	Sand coreopsis	<i>Coreopsis lanceolata</i>	PERENNIAL	12" O.C.															

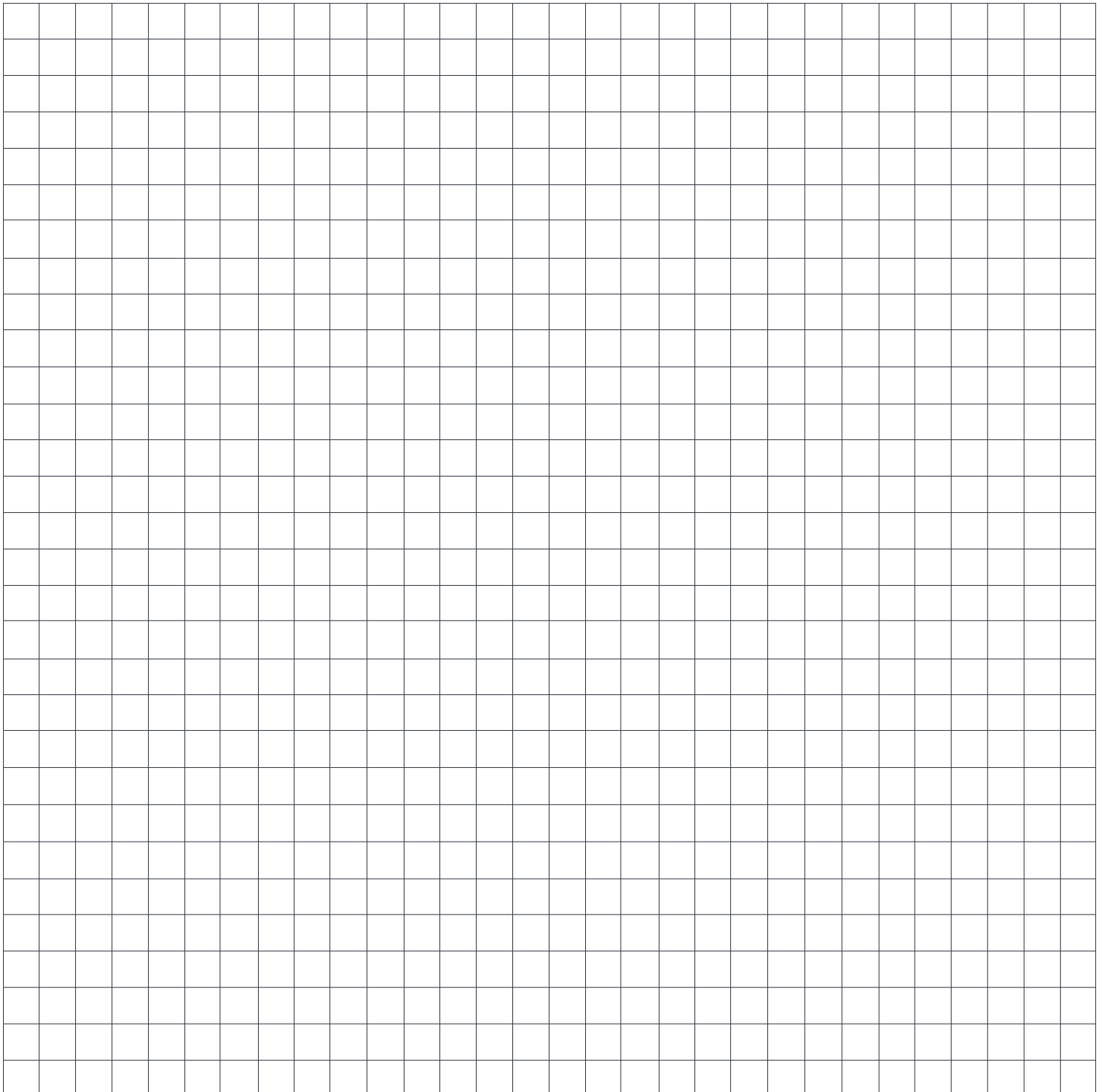
NOTES

LANDSCAPE WORKSHEET



Use the grid below to see which coastal landscape designs will best fit on your property. Follow these steps:

1. Measure your property boundaries and outline them on the grid. Use a drawing scale appropriate for your lot, for example 1 square equals 5 feet. The worksheet is 30-squares-by-30-squares.
2. Measure and outline buildings, driveways, impervious surfaces (e.g. paving or patios). Refer to a deed map, if one is available, for building dimensions.
3. Measure and draw existing trees, shrubs, perennials, vegetable gardens and other features you want to retain.
4. Make several copies of your drawing to use for preparing your final plan.
5. Sketch in locations and configurations of new landscaping. Be sure you know the sun and soil conditions on your property before choosing designs and plants to use.



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ADDITIONAL RESOURCES

- More on native plants and sustainable landscaping: go.ncsu.edu/CoastalLandscapes.
- Soil test kits and native plant gardening advice:
NC State County Extension County Centers (ces.ncsu.edu/local-county-center/)
and NC State Extension Gardener Handbook, Chapter 12
(content.ces.ncsu.edu/extension-gardener-handbook/12-native-plants)



UNC-SG-20-5