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Shrubs and Ground Covers

As discussed in the earlier section on design, drought tolerance and mature size are the two most important considerations for most median designs. While it is possible to keep shrubs at the required height through shearing or pruning, it is not a recommended practice. Maintenance resources are much better utilized elsewhere, and if the proper attention is not given for a period of time, a safety issue may develop.

There are a number of tried and true plants, native and exotic, that perform well in the harsh conditions of a road corridor, but no plant list should be static. Continual research and experimentation will result in the identification of promising new species ideal for median plantings. This is especially true for ground covers. Functional and attractive turf grass alternatives are always in demand. Examples of plants that may have merit as median ground covers are Perennial Peanut, Sensitive Plant, and Gopher Apple.

SHRUB AND GROUNDCOVER GUIDELINES

All plant material installed should be graded Florida No. 1 or better (see *Grades and Standards for Nursery Plants, Part I and II*).

No plant shall be permitted from the invasive species list, Section 30-251 of the Gainesville Land Development Code.

All plant material shall be installed in the following minimum container sizes:
Shrubs – 3 gallon
Ground Covers – 1 gallon
Wildflowers and Annuals – 4-inch pots.

All plant material shall be spaced to obtain a solid massing in 18 months.

Turf Grasses

Because of their ease of establishment, low initial cost and erosion control capability, turf grasses are a popular choice for large areas. But for typical narrow medians, both the county and city promote the use of ground covers over turf grasses. Anytime employees are maintaining medians they are at risk, and mowing turf grass requires the most time of any maintenance task. Any strategy that results in the reduction of mowing in the middle of a roadway should be given high consideration.

The basic function of turf grasses along highways is soil stabilization, especially on slopes. In level medians, the function is more aesthetic. Small sections of turf however, are maintenance intensive in time and fuel, may require the application of toxic pesticides and fertilizers, and are dangerous to mow.

The basic types of turf grass used in this area are common Bermuda, Bahia, and St. Augustine.

Common Bermuda, *Cynodon dactylon*, is preferred by FDOT for roadside establishment. It is drought tolerant, can be easily established with seed or sod, provides excellent cover with its ability to spread, and is relatively low growing. While this is the same species of grass that is used for athletic fields and golf course greens, those are improved hybrids that require substantially more water, fertilizer, pesticides, etc. to maintain their dense lush appearance.

Bahia, *Paspalum notatum*, is a drought tolerant, deep rooting grass, that can also be easily established with seed or sod. Bahia, preferred by the Alachua County, does not spread quickly like Bermuda, which has its advantages and disadvantages. Any bare spots that may develop will best be remedied by over-seeding, but the frequency required for edging at bedlines and along curbs is much less than with Bermuda. 'Argentine' Bahia is the cultivar of choice, due to its wider blades and less prolific seed heads, over the widely planted 'Pensacola' Bahia.
St. Augustine, *Stenotaphrum secundatum*, is a darker green, has wider blades, and is the most visually appealing of the three. FDOT refers to St. Augustine as a lawn grass and Bermuda and Bahia as utility grasses. St. Augustine is typically the turf grass of choice in high visibility areas accessed by pedestrians. However, St. Augustine is much less drought tolerant, has greater nutritional needs, and is more susceptible to pests than the others. There are many cultivars of St. Augustine available that offer shade tolerance, pest and disease tolerances, varying blade lengths, etc.

FDOT is performing and sponsoring on-going research into the use of various native turf grasses, especially in high salt regions. While they are not commercially available yet, some have shown promise.

TURF GRASS GUIDELINES:

Turf grass shall be installed as solid sod in all areas.

The choice of turf grass should be based on the species' drought tolerance, low fertilization and pesticide needs, and infrequency of edging. Different environments-soil characteristics, exposure to light, and wind current generated by high traffic speeds-will require different species. Also to be considered is whether the presence of seed heads (as occur on *Bahia* during midsummer) will be considered aesthetically unacceptable.

Turf grass is not recommended for high design medians. The typically small size and high sponsorship potential for these medians should allow for funding of all plant material designs. Decorative hardscape should be incorporated, if large numbers of people are expected to walk through these medians.

Wildflowers

FDOT has established wildflower plantings along roadsides throughout the state for years. This can be a good strategy to provide visual interest, lower maintenance cost, and safe clear zones. From a design standpoint, wildflowers are much more effective in large areas viewed at a distance. Typically the most successful plantings are in a rural context. Locally, wildflowers have long been a part of 441 on the way to Micanopy. Wildflowers are also a part of the Hawthorne Road corridor east of town and Waldo Road north of town.

Wildflowers are not part of the following plant listing. A successful program requires thorough research to match plant species with the existing growing conditions. Wildflower programs are typically established by seed and require the expertise of a contractor experienced in wildflower establishment.

PLANT LISTS

Shrub height restrictions create a significant limitation to the number of plants available for design. Drought tolerance and hardiness requirements also limit the number of plants. The following is a list of recommended trees, shrubs, and ground covers. The shrubs are categorized as low massing shrubs that are appropriate everywhere and accent shrubs. The accent shrubs exceed the height requirement for FDOT medians but may be considered for high design medians on city and county roads. There is also a section for plants that appear to have good potential for median planting but have been used sparingly to date. Only those plants that are suitable for north central Florida (zone 8B) have been listed.

For additional resources on these and other plants, consult the city or county horticulturalist, County Extension Service, "Recommended Highway Plant Materials" in the FDOT *Florida Highway Landscape Guide*, The Gainesville Tree List, and *Waterwise Florida Landscapes* by the Florida Regional Water Management Districts. There are also several good native plant books that specialize in Florida natives. The availability of Florida native plants continues to improve. Many native nurseries are developing new cultivars that keep the advantages of native adaptation while enhancing characteristics like color, size, and form.

RECOMMENDED PLANT LIST FOR MEDIANS

Native = Native to North Central Florida
Leaves = Deciduous (DE), Evergreen (E), Perennial (P)
Gateway = Recommended in the *Gateway Corridor Design Workshop* document
Soil Preference = Dry (DR), Moist ([W] only use in irrigated medians), Medium ([M] well-drained but not xeric soils of medium water-holding capacity)

Botanical Name	Common Name	Native	Leaves	Gate-way	Soil
Small Trees with Narrow Crowns					
Prunus umbellate	Flatwoods Plum	Yes	DE	Yes	DR
*Lagerstroemia indica**	Crape Myrtle	No	DE	Yes	DR
**Recommended cultivars: Natchez, Muskogee, Tuskegee*					
Cercis Canadensis	Redbud	Yes	DE	Yes	M
Pyrus calleryana CV. Aristocrat	Bradford Pear	No	DE	Yes	M
Viburnum obovatum	Walter's Viburnum	Yes	DE	No	M
Small to Medium Trees with Small to Medium Crowns					
Ulmus parvifolia CV. Drake	Drake Elm	No	DE	Yes	M
Ilex X attenuata CV. East Palatka	East Palatka Holly	No	E	Yes	M
Ilex vomitoria	Yaupon Holly	Yes	E	Yes	DR
Betual nigra	River Burch	Yes	DE	Yes	W
Ostraya virginiana	Hop-Hornbeam	Yes	DE	Yes	DR
Juniperus virginiana	E. Red Cedar	Yes	E	No	DR
Pinus glabra	Spruce Pine	Yes	E	Yes	M

Medium Trees (under median conditions), Narrow Crowns					
Acer barbatum	Florida Sugar Maple	Yes	DE	Yes	M
Taxodium distichum	Bald Cypress	Yes	DE	Yes	W
Diospyros virginiana	Persimmon	Yes	DE	No	M
Magnolia grandiflora	Southern Magnolia	Yes	E	Yes	W
Tilia caroliniana	Basswood	Yes	DE	No	W
Pinus palustris	Longleaf Pine	Yes	E	No	M
Pinus elliottii	Slash Pine	Yes	E	No	M
Ulmus crassifolia	Cedar Elm	Yes	DE	No	W
Fraxinus pennsylvanica	Green Ash	Yes	DE	No	W
Fraxinus americana	White Ash	Yes	DE	Yes	M
Large Trees with Large Crowns					
Quercus virginiana	Live Oak	Yes	E	Yes	DMW
Ulmus alata	Winged Elm	Yes	DE	Yes	M
Ulmus floridana	Florida Elm	Yes	DE	No	M
Quercus falcate	Southern Red Oak	Yes	DE	No	DR
Quercus shumardii	Shumard Oak	Yes	DE	Yes	W
Quercus geminata	Sand Live Oak	Yes	E	No	DR
Palms					
Phoenix canariensis	Canary Island Date Palm	No	E	No	M
Phoenix Dactylifera CV. Mejool or CV. Zahedii	Date Palm	No	E	No	DR
Sabal Palmetto	Cabbage Palm	Yes	E	No	DMW
Washingtonia filifera	Washington Palm	No	E	No	DR
Accent Shrubs and Small Palms					
Chamaerops humilis	European Fan Palm	No	E	No	M
Cycas revoluta	King Sago	No	E	Yes	M
Duranta repens	Golden Dewdrop	No	P	No	M
Erythrina herbacea	Coral Bean	Yes	P	No	M
Hamelia patens	Firebush	Yes	P	No	
Malvaviscus arboreus	Turks Cap	No	P	No	M
Loropetalum chinensis 'Rubrum'	Loropetalum	No	E	No	M
Sabal minor	Dwarf Palmetto	Yes	E	No	W
Serenoa repens	Saw Palmetto	Yes	E	No	
Spartina bakeri	Sand Cord Grass	Yes	E	No	
Trachycarpus fortunei	Windmill Palm	No	E	No	M
Yucca filamentosa	Adam's Needle	Yes	E	No	D
Low Massing Shrubs					
Ilex cornuta 'rotunda'	Dwarf Chinese Holly	No	E	Yes	M
Ilex vomitoria 'Nana	Dwarf Yaupon Holly	Yes	E	Yes	M

Juniperus parsonii	Parsons Juniper	No	E	No	D
Rhaphiolepis indica	Indian Hawthorn	No	E	No	M
Zamia floridana	Coontie	Yes	E	Yes	M
Ground Covers					
Hemerocallis spp.	Daylilly	No	E	No	M
Juniperus conferta	Shore Juniper	No	E	No	D
Liriope muscari 'Evergreen Giant'	Evergreen Giant Liriopi	No	E	Yes	M
Muhlenbergia capallaris	Muhly Grass	Yes	P	No	M
Trachelospermum asiaticum	Dwarf Asian Jasmine	No	E	Yes	M

Native Plants to Experiment With		Exp.
Arachis glabrata	Perennial Peanut	P
Potential turf replacement, prolific yellow flowers		
Eragrostis spectabilis	Purple Love Grass	P
Native bunch grass, 2 ½ feet, purple fall plumes		
Hypericum reductum	St. John's Wort	E
Low growing native shrub, yellow flowers		
Licania Michauxii	Gopher apple	E
Low growing native ground cover		
Mimosa strigillosa	Sensitive Plant	P/E?
Low growing native ground cover, pink flowers		
Spartina patens	Saltmeadow Cord Grass	P
Smaller version of Spartina bakeri		
Vaccinium Darrowii	Evergreen Blueberry	E
Low growing evergreen blueberry, needs acidic soil		

PREPARATION AND ESTABLISHMENT

The median environment is exceedingly harsh as it is designed to move water away and exhibits extreme temperature buildup from the pavement. It is typically dry from no irrigation and sometimes floods due to poor drainage. The following section deals with those elements of the median design that are purely functional and typically unseen. But their contribution is obvious to the health and vigor of the plant material.