

Horizontal Clear Zone

The horizontal clear zone provides a safe zone for vehicles that run onto a median. The type of curb used on a median has an affect on the width of the clear zone. The use of non-mountable curbs significantly reduces the required width of the horizontal clearance zone. The City of Gainesville follows Local Governments Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways, Sec. 334.0-441(10) A and 336.045 Florida Statues, published in 1998.

Trees are the biggest issue for Gainesville when it comes to median design and guidelines. How best to balance the many advantages of trees and a healthy urban forest with the utility and safety constraints present in a roadway corridor is the major question. With the majority of utilities in the right of ways, the larger issue is the safety concern large trees present to cars that lose control and run onto medians.

There is an on-going debate on roadside trees and safety. One view is that they are a hazard to traffic, while the other view is that they are successful at traffic calming (slowing). The multiple benefits of pollution filtering, oxygen generation, urban heat reduction, sound buffering, and aesthetic character must also be acknowledged.

The mandated size of the separation between the road edge and planted trees varies in the regulations specified in the Local Governments Manual of Uniform Minimum Standards for Design, Construction and Maintenance of Streets and Highways, Sec. 334.0441(10) A and 336.045 Florida Statues. If the curb is non-mountable, the clearance zone is 2.5' for roads with speed limits of 25 mph or less and 6' for greater speed limits. If the curb is mountable, these distances increase to 6' and 10' respectively. Therefore, non-mountable curbs and lower speed limits are preferred.



Figure 25
Crape Myrtles and Mountable Curb



Figure 26
Large Oak and Non-Mountable Curb

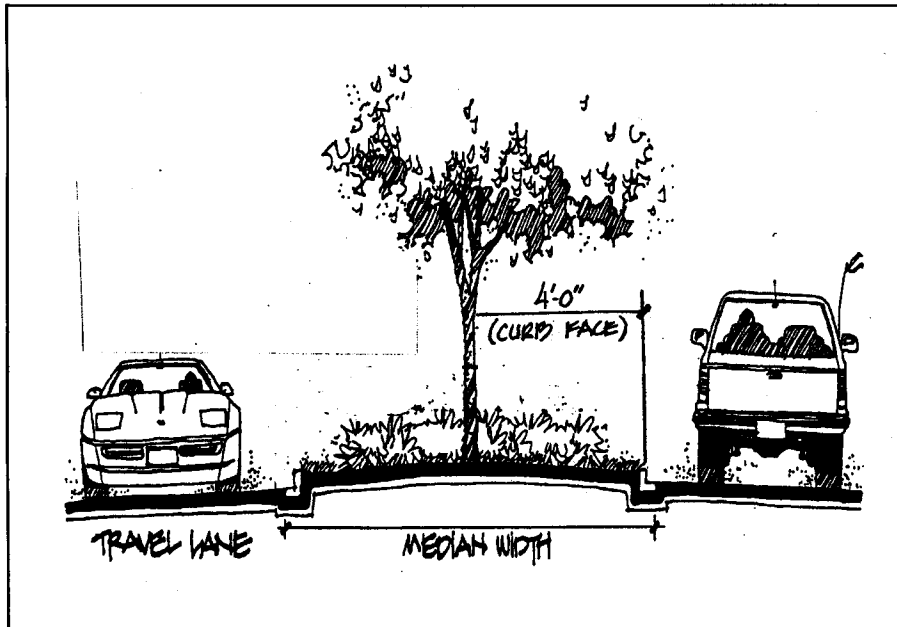
HORIZONTAL CLEAR ZONE GUIDELINES

The standard clear zones adopted by the government agency responsible for the road will be followed.

Roadways with a design speed of 40 mph or greater and with medians having no curb or mountable curbs shall maintain a 30-foot median clear zone from both pavement edges.

Roadways with a design speed of 40 mph or greater and with medians having non-mountable curbs, shall maintain a 4-foot median clear zone from curb face.

Roadways with a design speed less than 40 mph shall maintain a 4-foot median clear zone from curb face or pavement edge if no curb.

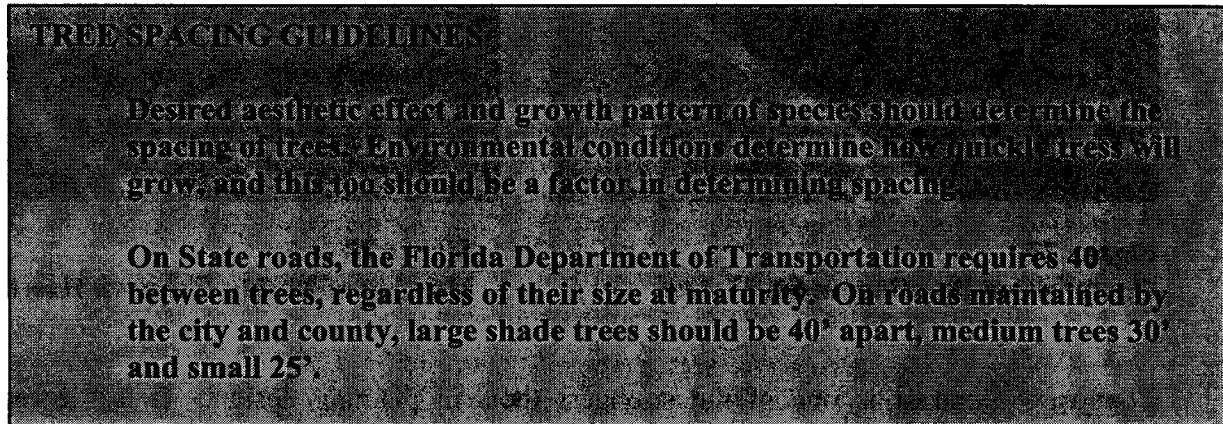


Horizontal Clear Zone

Illustration from the 1995 *Florida Highway Landscape Guide*

Tree Spacing

Because multiple tree trunks can hamper vision at certain angles (foreshortened perspective), tree spacing is dictated by FDOT within the vision triangle of an intersection (median cuts are treated the same as intersections). The spacing is a factor of trunk diameter and design speed. The length of median section affected by these guidelines is also a function of design speed.



Aesthetic Considerations

Massing versus Composition Planting – This is one of the design areas that should be influenced by the median classification. High design medians, with slow traffic and close proximity to pedestrians can be enhanced by greater plant composition (figure 27). The additional maintenance required with the use of accent plants, defined bed lines, color and texture contrasts, etc. may be worthwhile in this context. As the traffic speed and separation of pedestrians increases, the benefit of a composition planting decreases. At high speeds, the composition planting is less appealing than the massing of a single ground cover. Single plant massings support the median as an individual element in the larger scale of a corridor design (figure 28).



Figure 27
Composition Planting on SE 1st Ave

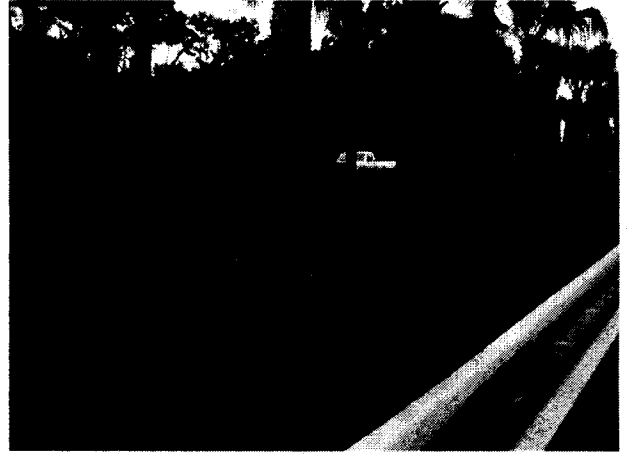


Figure 28
Massing of Muhly Grass on Hawthorne Road

Contrast - Contrast is one of the strongest tools in planting design. It is the reason one composition is appealing, and another composition (with the same number and size of ground covers and shrubs) is not. Contrast can be through shade (light and dark greens), color (flowers or foliage), texture (large coarse leaves next to many tiny leaves), or form (a vertical element out of a low horizontal massing). The use of contrast is only applicable for the occasional high design median as the majority of medians are medium or low design and should incorporate massing only. See figure 29 for an example.



Figure 29
Crinum Lillies provide contrast in texture and form in a bed of Indian Hawthorne

Design Lifespan

Every landscape should be reviewed periodically to ensure the original characteristics are still present. Medians must be reviewed from time to time as a whole, instead of plant by plant as is typical in maintenance mode. Some questions include: What is the overall health of the plant material? Are there structural weaknesses in the trees? Is everything being pruned to keep the size down? Are there conflicts with utilities? Is the original design recognizable? There comes a time when the best course of action is to start over.

Xeriscape (Right Plant Right Place)

Xeriscape techniques and methods are encouraged by Florida Statutes, FDOT Rules, State Water Management Districts, and the American Society of Landscape Architects, to mention a few. With the harsh conditions presented by the typical median, these techniques are necessary for a successful median planting.

Summary of the seven principles of xeriscape landscaping are as follows:

1. Plan and Design – Make a plan based on site's natural conditions. Be sure to consider elements of growth, time, and change in the plan.
2. Obtain a Soil Analysis – Determine the soil's composition and test for the pH of the soil as an aid in plant selection. Amend soils as needed prior to planting.
3. Choose Proper Plants – Select plants that are (a) suited to the growing conditions, (b) drought tolerant, (c) resistant to disease and pests, and (d) with an appropriate mature size.
4. Use Turf Wisely – Minimize turf grasses to those areas where it serves a specific function. Use drought tolerant species.
5. Irrigation Efficiently – Irrigate only if necessary. Group plants based on their water needs and utilize the right system and components for each area.
6. Use Mulches – Mulches help hold moisture in the soil, moderate temperature, release nutrients, reduce weed growth, and slow erosion.
7. Perform Proper Maintenance – Keep plants healthy by not over-watering or over-fertilizing. Attend to weeds and pests before they become a major problem.

For a more in-depth discussion of xeriscape principles, see *Waterwise Florida Landscapes*, published jointly by the five regional water management districts.

PLANTS

Florida Natives

Plant species native to north-central Florida should be given extra consideration when selecting plant material. As a general rule, natives are better adapted to the climate, are more pest resistant, and often have lower nutrient requirements than non-native plants. There are, however, several non native plants that have proven to be consistent performers in the harsh conditions of parking lots and medians. These include Parsons Juniper, Indian Hawthorn, and Evergreen Giant. Utilizing natives in public situations helps to educate the public about other plant options that are better suited for the conditions and wildlife in their yards. Planting natives also helps to show the beauty and uniqueness of north-central Florida.

Trees

Trees should be given top priority when planning a median. No other landscape element has a greater impact on the overall appearance of a corridor. Trees provide scale to the roadway and a host of environmental benefits as mentioned previously in the discussion on horizontal clear zones. Because of these benefits, trees should always be the first consideration when funding becomes available for median enhancements. This would include the installation of curbing (where this is none) before any planting is approved. As discussed in the section on horizontal clear zones, trees are more likely to be approved when protected by non-mountable curbs.

There are many variables to consider when selecting tree species. Characteristics to consider are: mature size, branching habit, root system characteristics, culture requirements, cold hardiness, water requirement, storm breakage, leaf and fruit drop, evergreen or deciduous, single or multi trunk, and color.

TREE GUIDELINES

Trees are to be given first priority over other plantings if limited funding is available.

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

Tree species shall be selected from the Gainesville Tree List, Section 30 – 269 of the Gainesville Land Development Code Tree.

Tree species native to North-Central Florida shall comprise at least 75% of the canopy trees within a roadway corridor.

Canopy trees shall have a minimum height of 8 feet and minimum caliper of 2 inches at the time of installation.

Small flowering trees, i.e., crape myrtles, shall have a minimum height of 6 feet at the time of installation.

All trees less than 3 inches in caliper shall be container grown. Trees 3 inches or greater in caliper may be field grown, following industry standards for transplanting from nursery to project site.

Palms shall have a minimum 8 feet of clear trunk at the time of installation.