

Greening Parking

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Green Law Research Project

“This ULDC is adopted.... to encourage the orderly, harmonious
and judicious use of land, consistent with the goals, policies and
strategies of the Alachua County
Comprehensive Plan.”

Alachua County government, 2011



Nature In The Parking Lot

If nature is to be preserved, protected or re-built in tightly compact urban areas it must be carved out of the excess paved land devoted to automobiles. The largest amount of available space to be found is within paved over land used for storing automobiles. In this column my research on Green Parking has been reported upon several times to examine the root principles of landscape sustainability and how they apply to the greening of parking lots.

The Use of Land

In most situations the ecology of a parking lot is non-existent. Paved parking increases the urban heat island effect, pushes polluted runoff quickly into fresh water streams or overloaded sewer systems and provide no habitat for wildlife. Most parking areas are even questionable habitat for people. Most parking lots as viewed from the public street are glaring and unattractive with oversized travel lanes, parking spaces and multiple curb cuts that are always potential traffic pedestrian conflict points.

In all situations the landscape code which is also part of the zoning ordinance will guide the landscape architect in the greening of the parking lot. That is, if the parking lot regulations and the landscape code are in sync. Tragically, most landscape codes and parking regulations are not in integrated and this is the reason many parking lots are designed by engineers or architects. In these older codes, landscape architects are often called in last to plant small little spaces that have been left over around and within the parking surface.

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The whole concept of “nature giving shape to the layout and configuration of the parking lot” is lost with outdated zoning ordinances. For parking lots to go green, the parking code must be coordinated closely with the landscape code. Since both are in the same document that ought to be easy to do.

Designing parking lots to be green mean they must be designed using sustainable landscaping principles that will bring ecology and life back to these important parts of our cities and towns. But even more important, for parking lots to go green, they must be allowed to go green by the codes.

We are starting to see a transformation in the codes leading to sustainable design. **Alachua, County, Florida** surrounding Gainesville is one example of a code who is blending their parking requirements with their landscape code to encourage sustainability. Codes such as this one will lead the transformation of landscape codes in to sustainability options. These options involving environmental improvements based upon soils, water, vegetation, green construction materials and human wellbeing. When these principles of the **Sustainable Sites Initiative** are combined with sustainability principles from the **Florida Friendly Landscaping Program** dealing with regional design, air, wildlife, recycling and climate modification, food production together they will assist in putting the parking lot work.

The Alachua Code

Alachua recently updated their zoning code in to a Unified Land Development Code format in September of 2011. (*Alachua County Code, Part III, Title 40 Land Development Regulations, Chapter 407, Articles II, IV, V, and VI*)

This code harmonizes several parts of the code include parking standards, *Article 2, §407.12*, landscape standards, *Article 4, §407.40 et seq*, open space standards, *Article 5, §407.56* and environmental performance standards, *Article 6, §407.60 et seq*.

Even more interesting this code incorporates the landscape code into the planning required for new urbanism TND's and TOD's (Title 40, Chapter 407, Article 7, § 407.7.(c)). This is rare among zoning ordinances.

The Landscape Code

The landscape code as set forth in *Title 40, Chapter 407, § 407.40 – 407.50* clearly makes a case for combining the landscaping of the parking lot with any open space network connection, preserving native habitat where possible and designing the open space with native plants in a way that will promote *Xeriscaping™* and water conservation.

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Further, the text language points the designer in the direction of integrating the landscape and storm water management facilities into the existing soils, topography and hydrology of the site in a way in which design forms resemble natural areas found in Florida. The designer is also encouraged to reduce the use of impermeable paving to a minimum of 10% of the surface areas and use permeable paving to reduce runoff, infiltrate storm water and allow more root space for shade trees.

Pollutants from the parking lot will be captured in a parking lot detention which is the central feature of site's the storm water management system. The urban forest canopy of the site is an important factor in the landscape design. Parking areas are to have a 30% coverage within twenty years as a result of the proper selection, location and spacing of species. In addition, deciduous trees must be used to produce shade on building walls to reduce the use of energy. Since many parts of Florida have minimal heating systems, winter sunshine is used to warm building interiors.

Other landscape components fit into the require 20% open space requirement of the code. They include four types of project boundary buffers, 3 types of roadway buffers, paved area screens (75% opacity), pedestrian walkway plantings, street trees, trees within paved surfaces (50% shade coverage / 20 years).

In addition to these standards, specific details are provided for the design of storm water management facilities, utility service areas and water conservation facilities.

Summary

This is a code worthy of study by those interested in upgrading and harmonizing their local landscape and parking codes. What makes this code particularly exciting, from a sustainability perspective, is the parking and landscape design requirements are directly tied to environmental performance standards, Article 6, §407.60 et seq, that measure heat, cold, fire, fumes, vapors, gases, waste, odor, air movement, glare, noise, smoke, dust, dirt and several others.

It is a matter of time before sustainable site design requirements are incorporated into American landscape codes.

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Word Count 971 LASN Greening Parking v2



SEE ILLUSTRATIONS BELOW



Fig. 1 LEED Platinum Green Parking....Photo: Brandi White Blog Spot.

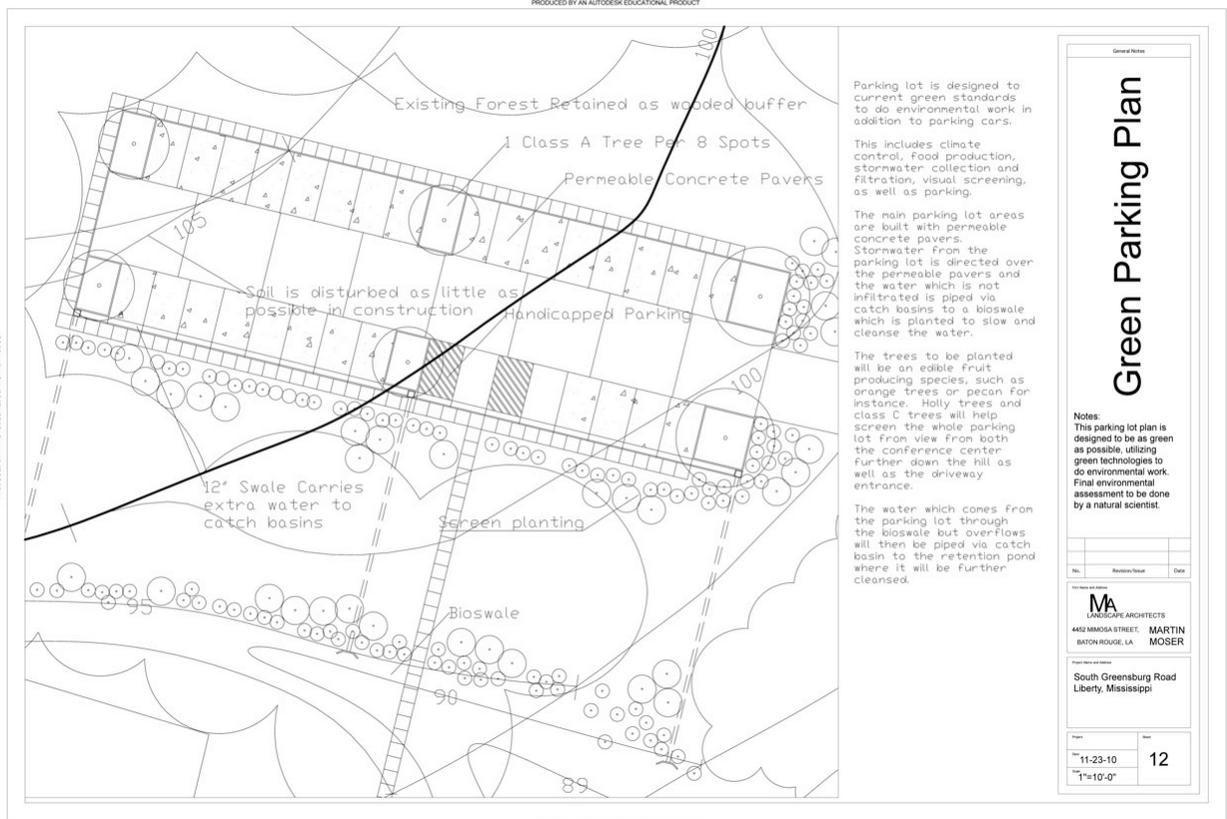


Fig. 2 Green Parking Plan....Martin Moser Louisiana State University.

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