



PLANNING COMMISSION

Department of Urban Planning & Design • P.O. Box 27210 • Tucson, AZ 85726-7210

DATE: December 3, 2008

TO: Planning Commission

FROM: Albert Elias, AICP
Executive Secretary

SUBJECT: Proposed Amendments to Land Use Code – Continued Public Hearing:
Landscape Buffer & Screening: Trees in Parking Lots and Plant
Cover/Dust Control

Issue: The Planning Commission had seven issues summarized by Commission Chair Rex at the November 5, 2008 public hearing related to this proposed Land Use Code amendment. This memo covers those issues and also attempts to clarify what currently exists in the Land Use Code, the Development Standards and the amendment request.

Recommendation: Staff recommends the Planning Commission forward the proposed Land Use Code Amendment of Division 7, section 3.7.2.3 (Vehicular Use Areas), A. (Canopy Trees in Vehicular Use Areas) and section 3.7.2.7 (Plant Cover/Dust Control) to Mayor and Council with a recommendation for approval.

Amendment Request: Division 7: 3.7.2.3.A. Canopy Trees in Vehicular Use Areas: Amend current requirement of 1 tree for every 10 motor vehicular parking spaces to “1 tree for every 4 motor vehicular parking spaces.”

Division 7: 3.7.2.7 Plant Cover/Dust Control: Add the following sentence to section B: “All portions of a site including common areas, natural areas, and revegetated or landscaped areas are to be continuously maintained to remove populations of buffelgrass (*Pennisetum ciliare*).

These requests are consistent with policy direction in the General Plan and Mayor and Council adopted sustainability-related direction. The trees in parking areas are a step toward mitigating urban heat island effects. The Plant Cover/Dust Control is a companion requirement strengthening the buffelgrass control amendment recommended by the Planning Commission to the Native Plant Preservation regulation at the November 5, 2008 public hearing.

These revisions are reflected in Attachment A.

Issues summarized by Planning Commission Chair Rex at the November 5, 2008 Public Hearing:

1. Providing material to Planning Commission in a timely manner

- Staff’s objective is to provide materials at least 72 hours prior to the Planning Commission meeting. Every effort will be made to meet this objective.

2. *Commercial Rainwater Harvesting Ordinance*

- A full text of this ordinance has been provided as an attachment.

3. *Opportunities to partner/reach out to businesses at the intersection of Grant and Alvernon during the Grant Road improvement process (as being done by the Tucson Botanic Garden Executive Director).*

- Irene Ogata, City of Tucson’s Urban Landscape Manager, Department of Urban Planning and Design is part of the core management team providing input on landscape and water harvesting opportunities along the Grant Road transportation corridor.
- In a telephone conversation (November 10, 2008) with Nancy Laney, Executive Director of Tucson Botanical Gardens, and a member of the Grant Road Citizen Advisory Committee and a member of the COT Landscape Advisory Committee (LAC) confirmed the LAC has been updated by Kimley-Horn, the primary consultant of the roadway project, and is informed regarding landscape issues along this corridor.

4. *Considerations to require 75% of trees to be native species.*

- Current code does specify “canopy” tree with definition of canopy tree (“A woody plant, other than a palm tree, with a mature crown diameter of at least fifteen (15) feet and having a trunk that, at maturity, is kept clear of leaves and branches at least six (6) feet above grade.”).
- Current code (3.7.2.2: Use of Drought-Tolerant Vegetation): “. . . all plant material used for landscaping shall be selected from the Drought Tolerant Plant List in Development Standard 2-06.0.”
- Staff supports the option of including this requirement in the Development Standards for parking lots.

5. *Fire Department requirement: clearance of trees.*

- This issue of clearance for large vehicles has been addressed by the Development Standards and the Land Use Code.
- As stated in the Land Use Code definition of canopy tree (“. . . having a trunk that, at maturity, is kept clear of leaves and branches at least six (6) feet above grade.”).
- Development Standard 2-06.3.1.H: “Plant materials proposed for locations subject to maximum heights and/or minimum canopy heights shall be capable of being maintained as required without adversely affecting the health of the plant materials.”

6. *Fire Department equipment weight bearing clearance: porous concrete/pervious asphalt.*

- This issue has been addressed by the memo from the Engineering Administrator of Development Services Department (DSD) and the Land Use Code about vehicular weight bearing standards.

Proposed Amendments to the Land Use Code – Continued Public Hearing:

(1) Landscape Buffer & Screening: Trees in Parking Lots and Plant Cover/Dust Control

December 3, 2008

- Memo from City of Tucson Engineering Administrator of DSD, included for November 5, 2008 Public Hearing states pervious concrete pavements as relates to the Land Use Code section 3.3.7.3: Motor Vehicular and Bicycle Parking Requirements, Surface Requirements, *“The family of pervious pavement materials is generally categorized as porous concrete. . . for the purpose of parking lot paving on private property, may be considered equivalent and interchangeable to the conventional, surfacing materials as listed in the City of Tucson Land Use Code. . .”*
- Porous concrete paving is being recommended for revision to Development Standard 2-06 as an alternative when reduction in unpaved area of tree planter areas is requested. Development Standard revisions undergo a separate review process in which other departments, including the Fire Department, are able to comment on the revision.

7. Hydrology of parking lot as relates to porous paving and water under pavement.

- Memo from the DSD Engineering Administrator and additional research material clarify water – porous paving issue.
- Stated in the memo by DSD Engineering Administrator: *“When properly specified and installed, in conjunction with an industry standard maintenance schedule, . . . may be considered equivalent and interchangeable to the conventional, surfacing materials as listed in the City of Tucson Land Use Code. . .”*
- Included in the packet are:
 - City of Noblesville, IL, Pervious Concrete Pavement Design Requirements
 - Sultan, WA, use of pervious concrete by CMI Homes
 - City of Salt Lake, UT, news article to save parking lot tree, use of pervious concrete
 - ASU SMART Center Web page print-out about pervious concrete testing in Phoenix
 - American Society of Landscape Architect 1998 annual meeting presentation on Structural soil to allow trees to “thrive” in parking lots vs. just “surviving.”

Background: The following table illustrates proposed and existing items within the Land Use Code and Development Standard. Land Use Code amendments require Planning Commission and Mayor and Council public hearing. Development Standards are reviewed and revised through a separate administrative process. This process permits greater flexibility to change standards as technology and materials change. This process entails review by various City departments and/or approval by the City Manager.

	Land Use Code	Development Standard
Proposed	<ul style="list-style-type: none"> • 1 canopy tree every 4 motor vehicular parking spaces 	<ul style="list-style-type: none"> • Add alternative unpaved area: Reduce unpaved area to sixteen (16) square feet around trunk of tree, when porous paving is utilized around the unpaved area to create a total surface area of 100 square feet, including the 16 square feet unpaved area. Structural soil to be used within this unpaved-porous concrete area to provide for the aeration and water filtration into the soil to promote adequate root system growth.
Existing	<ul style="list-style-type: none"> • 1 canopy tree every 10 motor vehicular parking spaces [requesting amendment] • . . . Every parking space shall be located within forty (40) feet of the trunk of a canopy tree. . . • . . . unpaved planting area, . . . minimum of thirty-four (34) square feet . . . and four (4) feet in width. . . . • Structurally covered or underground motor vehicle parking spaces are not included in calculating the required number and location of canopy trees. • The following option may be used . . . to calculate the required number of canopy trees . . . shade pattern caused by trees at maturity and buildings . . . from 9:20 a.m. to 3:20 p.m. . . . on June 21 covers fifty (50) percent of the paved area. . . • . . . where plants are susceptible to injury by vehicular or pedestrian traffic must be protected by appropriate means, such as curbs, bollards, or low walls. 	<ul style="list-style-type: none"> • . . . a planter area with a minimum unpaved area of thirty-four (34) square feet and a four (4) foot minimum width is required. • The unpaved area may be covered with a permeable material or with grillwork, but air and moisture must be able to penetrate the soil. • Inert or vegetative ground cover is used in planter areas not otherwise occupied by trees, shrubs, or grillwork. • Canopy trees planted within and adjacent to vehicular use areas should be planted in a manner which will afford the greatest amount of shade to the paved areas. • Parking spaces may be designed so that the front of a vehicle overhangs into planter areas that are within a vehicular use area but cannot overhang into the street landscape border. • The maximum amount of overhang is the same measurement as the parking space wheel stop location, as permitted in Development Standard 3-05.0. • The planter area must have a raised border four (4) inches high to prohibit the tires of the vehicle from encroaching onto the planter [requesting revision]. • Only trees with single trunks are to be planted within these planters. Trees with multiple trunks need wider areas of growth and interfere with the vehicle [requesting revision].

Summary:

Mayor and Council policies advocate for greater mitigations of the Urban Heat Island and building in an ecologically sensitive manner.

General Plan policies promote quality in design for all new development and redevelopment. Development should follow environmentally sensitive practices that promote healthy city growth.

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December 3, 2008

Conclusion: The existing adopted policy of the Mayor and Council endorses Urban Heat Island mitigation. The proposed amendment promoting greater shade in parking areas addresses mitigation of Urban Heat Island.

Buffelgrass is an invasive species that threatens the Sonoran Desert Landscape. The amendment to the Plant cover/Dust Control in Div. 7 Landscaping and Screening regulations is a companion requirement strengthen the language amended request to the Native Plant Preservation ordinance for buffelgrass mitigation.

Based on these considerations and the input received at the Planning Commission’s public hearing, staff believes the proposed Land Use Code amendments are of importance and worthy of a supporting recommendation by the Planning Commission.

Attachment A: Proposed Amendment, 11-5-08, Division 7

COT Commercial Rainwater Harvesting Ordinance

Articles: • City of Noblesville, Dept. of Engineering, Pervious Concrete Pavement Design Requirements

- ConcreteNetwork.com article on Stratford Place, Sultan, WA
- Intermountain.construction.com article on “*Use of Sustainable Concrete Alternative Emerging in West*”
- ASUSMART.com website on Pervious Concrete construction Testing
- 1998 ASLA annual meeting presentation on Structural Soil