



City of Lawrence  
Douglas County  
PLANNING & DEVELOPMENT SERVICES

*TA-4-6-11*

*Revisions to Article 10 and 17 to  
include 'Synthetic Turf' as a  
landscaping material*

*August 24, 2011  
Planning Commission*

# REVIEW CRITERIA FOR TEXT AMENDMENT

Section 20-1302(f)

Error or Inconsistency in the Code or  
Challenge of a changing situation

AND

Consistency with the Comprehensive Plan  
and the stated purpose of the  
Development Code.

# Planning Commission Direction from June Meeting

1. Alternative Compliance
2. Other Communities
3. Environment Chapter
4. Comparison Table
5. Provision of Code Options

# Alternative Compliance Section 20-1007

“Topography, soil, vegetation, space constraints or other site conditions are such that full compliance is impossible or impractical, or improved environmental quality would result from the alternative compliance.”

# Alternative Compliance Criteria for Approval

Landscape plan shall be equal to or exceed  
traditional compliance in terms of

1. Quality of materials
2. Visual effect
3. Effectiveness in meeting the purpose in  
Section 20-1001, and
4. Material durability and hardness.

# Section 20-1001

## Purpose of Landscaping

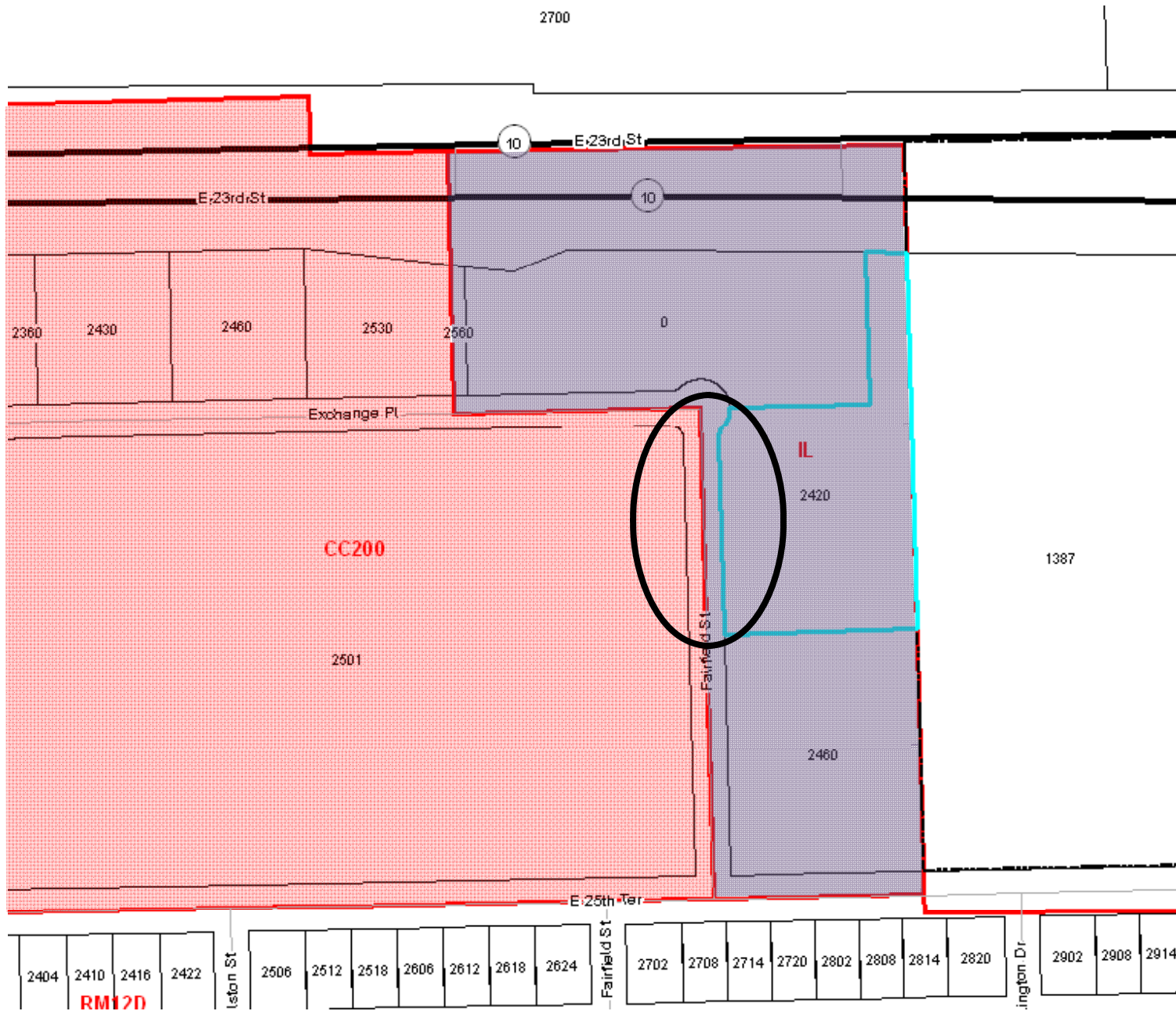
- Replenish the local stock of native trees.
- Preserve stands of mature trees.
- Screening.
- Buffering between incompatible uses.
- Reduce light spillover.

# Section 20-1001

## Purpose of Landscaping

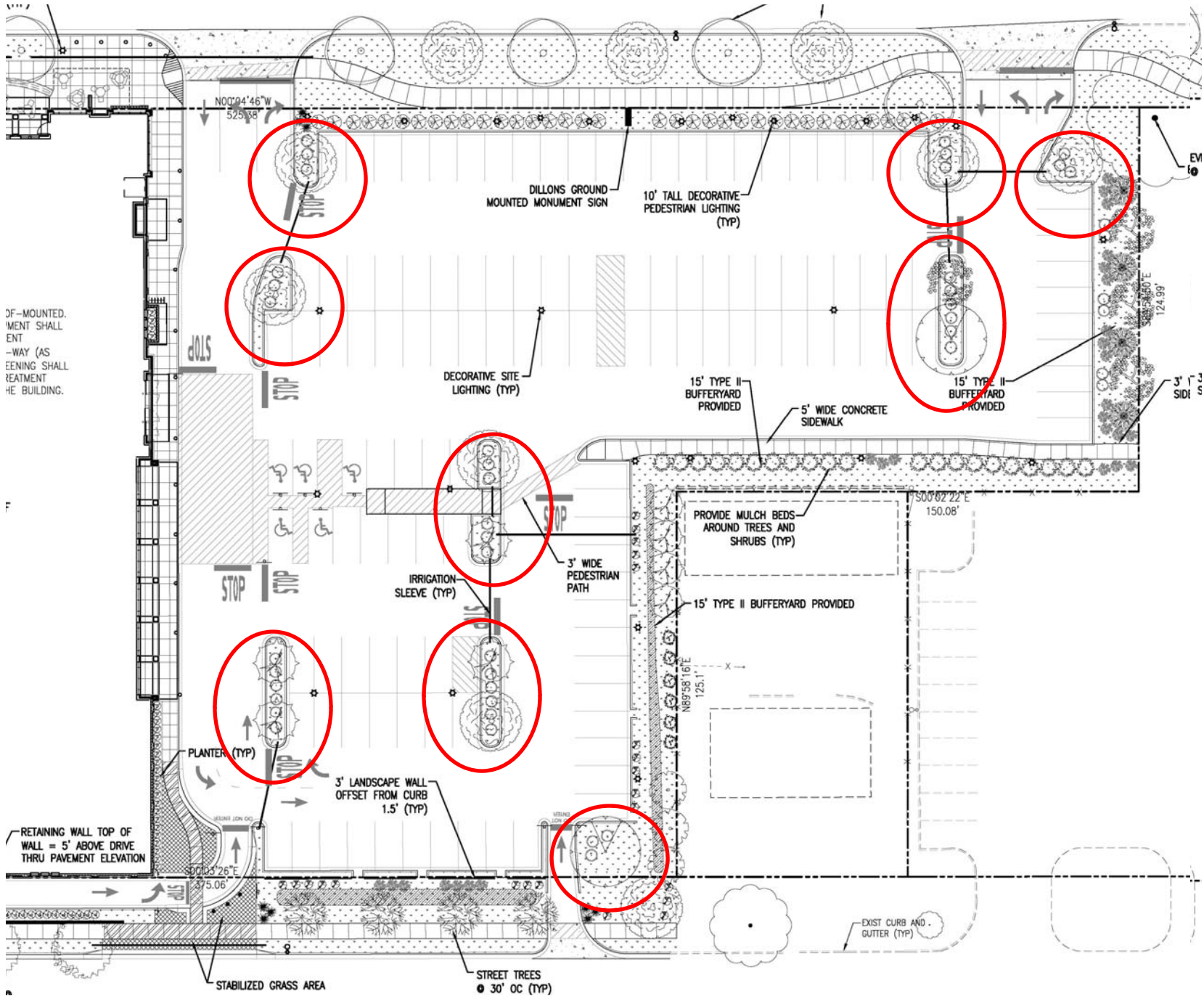
- Maintain the City's quality, heritage and character by enhancing its visual appearance with landscaping.
- Enhance environmental conditions by providing shade, air purification, oxygen regeneration, groundwater recharge, filtering of stormwater runoff, abatement of noise, glare and heat.

2700









OFF-MOUNTED. SIGNMENT SHALL BE MOUNTED ON THE BUILDING. (AS SEEN) SHALL BE TREATED AS A BUILDING.

RETAINING WALL TOP OF WALL = 5' ABOVE DRIVE THRU PAVEMENT ELEVATION

STABILIZED GRASS AREA

STREET TREES @ 30' OC (TYP)

EXIST CURB AND GUTTER (TYP)

DILLONS GROUND MOUNTED MONUMENT SIGN

10' TALL DECORATIVE PEDESTRIAN LIGHTING (TYP)

DECORATIVE SITE LIGHTING (TYP)

15' TYPE II BUFFERYARD PROVIDED

5' WIDE CONCRETE SIDEWALK

15' TYPE II BUFFERYARD PROVIDED

3' 1/2\"/>

PROVIDE MULCH BEDS AROUND TREES AND SHRUBS (TYP)

15' TYPE II BUFFERYARD PROVIDED

IRRIGATION SLEEVE (TYP)

3' WIDE PEDESTRIAN PATH

3' LANDSCAPE WALL OFFSET FROM CURB 1.5' (TYP)

PLANTER (TYP)

N00°04'46\"/>

S00°02'22\"/>

S88°58'50\"/>

N89°58'16\"/>

S00°55'26\"/>

525.38'

175.06'

150.08'

125.1'

124.99'

F

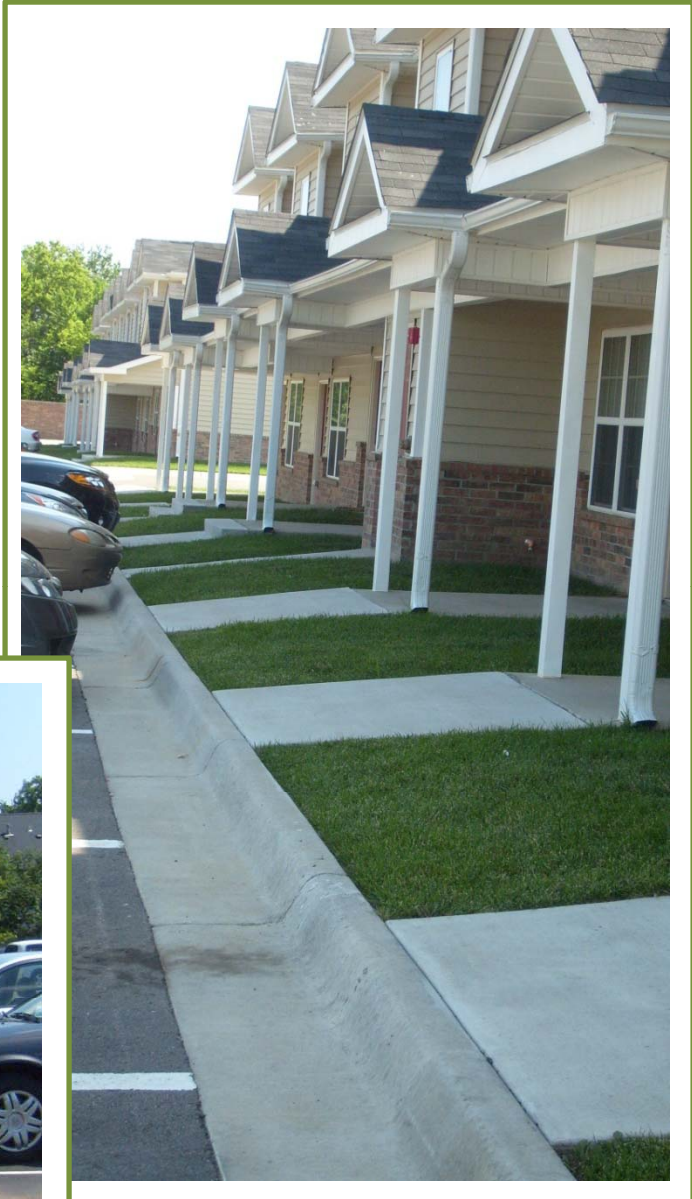
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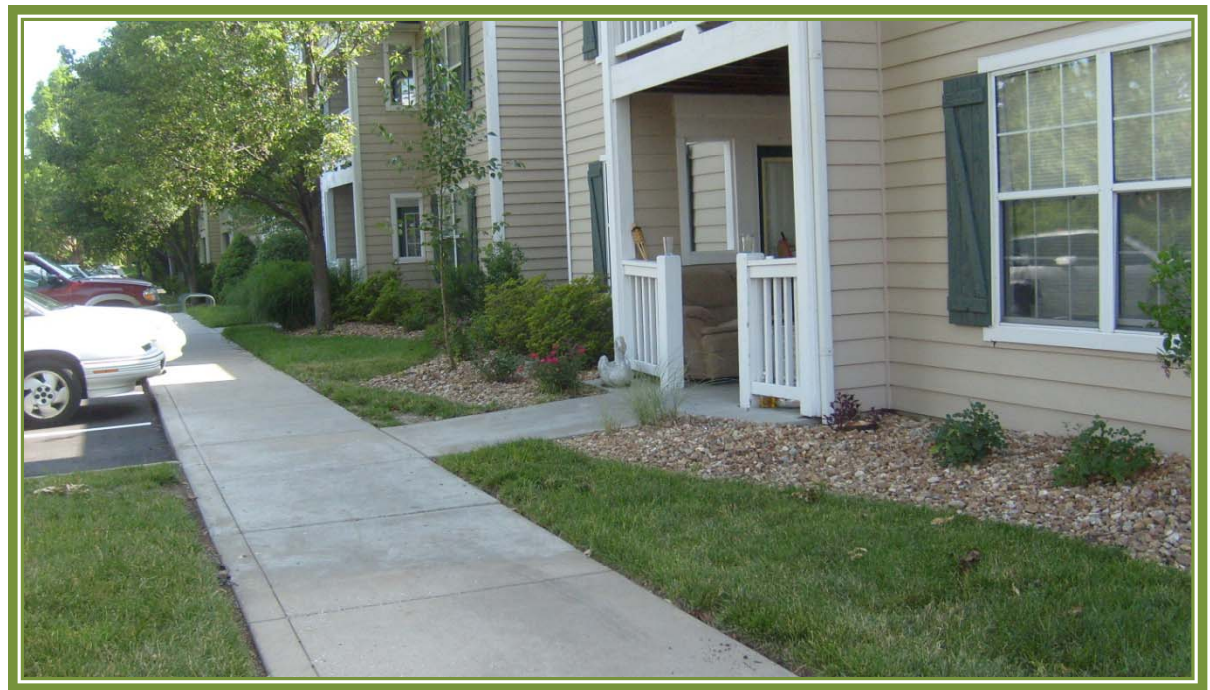
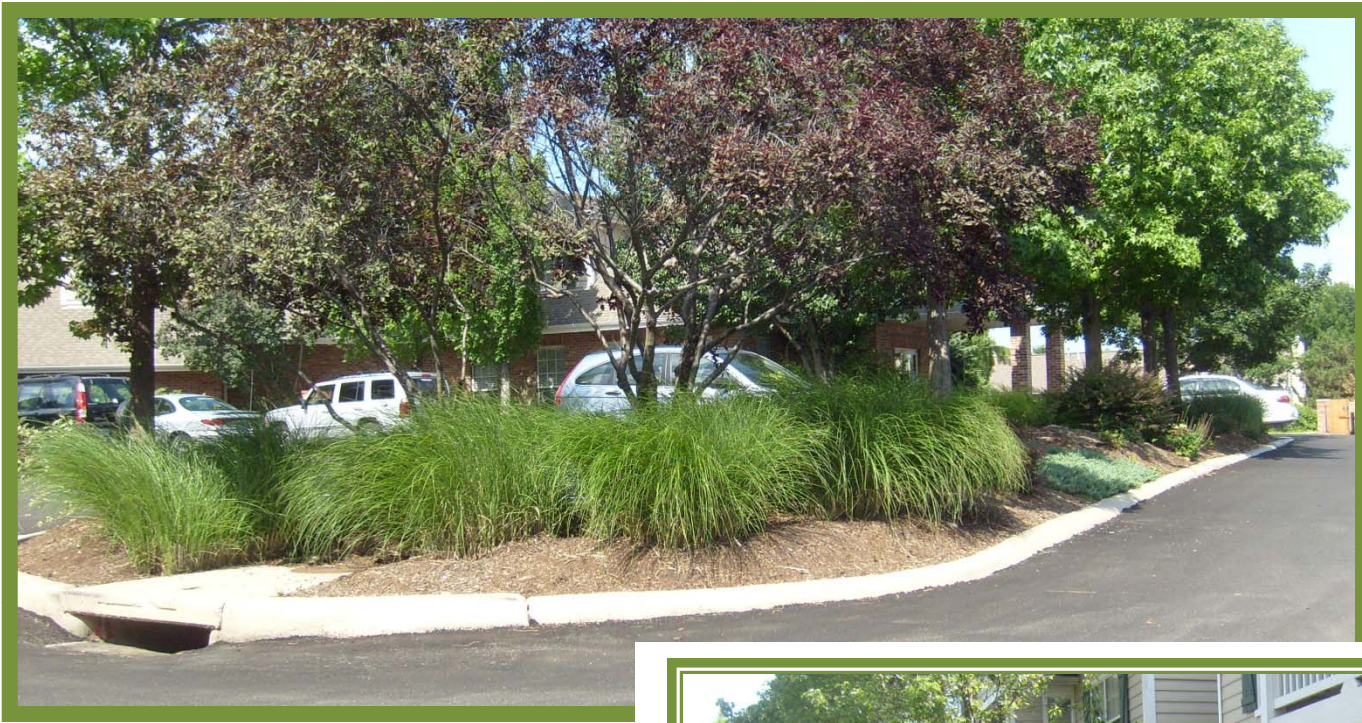


## **Alternative Compliance: (Section 20-1007(b))**

**Determined on a Case by Case basis.**

**Does not set a precedent for alternative compliance on other sites.**







## **Other Communities:**

**Many communities in California, Arizona, Florida and Colorado permit the use of artificial turf.**

**Compliance with state conservation requirements.**



# The use of artificial turf is prohibited in Cerritos

April 29, 2011

City staff researched the use of synthetic turf material in residential applications and found that the use of artificial turf creates an area of diminished biological activity which inhibits the flow of oxygen and nutrients to the soil. Organic landscapes comprised of trees, shrubs and turf produce oxygen and store carbon, and provide benefits such as shade, lower temperatures and pollution mitigation. The use of artificial turf has the potential to diminish the health of trees and plants located in the surrounding landscape and environment.

The City has determined that the use of artificial turf in residential applications is not an adequate substitute for organic plant material, and that it does not meet the City's development standards as established within the Cerritos Municipal Code for residential applications.

California native and/or drought tolerant ground covers and shrubs are more beneficial substitutes for turf if property owners are looking for ways to lower water use and/or landscaping maintenance.

## OTHER COMMUNITIES

<b>Community</b>	<b>Provision</b>	<b>Comments</b>
Garden Grove, CA	Permitted with regulations	12.6" annual precipitation
La Palma, CA	Permitted with regulations	12.0" annual precipitation
Santa Ana, CA	Permitted with regulations	13.9" annual precipitation
Fullerton, CA	Permitted with regulations	12.0" annual precipitation
Orange, CA	Permitted with regulations	12.0 "annual precipitation
Laguna Hills, CA	Permitted in residential with regulations	12.0" annual precipitation
Stanton, CA	Permitted in Residential Zones with regulations	12.0" annual precipitation
Englewood, CO	Permits but may not be counted toward 'live' landscaping requirements. 70% of required landscaping must be live material.	15.0" annual precipitation
Punta Gorda, FL	Permitted as Special Exception	56.49 "annual precipitation
El Paso, TX	Permitted with Alternative Compliance	8.8" annual precipitation
Austin, TX	Not permitted	31.9 "annual precipitation
Omaha, NE	Not permitted.	30.08" annual precipitation
Madison, WI	Not permitted	31.0" annual precipitation
Olathe, KS	Not permitted	40.1" annual precipitation
Greeley, Fort Collins CO	Not permitted	14.2" & 15.8" annual precipitation
Windsor, CO	Not permitted	15.0" annual precipitation
Cerritos, CA	Specifically prohibits	15.0" annual precipitation





## **Kansas Water Plan:**

- **Low flow plumbing**
- **Low water need landscaping**
- **Reduction of runoff**
- **Water reuse.**



## **Artificial Turf :**

- 1. Requires less water,  
Water conserving.**  

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- 2. Requires no chemicals,  
Less pollution.**
- 3. Requires no mowing,  
Reduced emissions.**



# **Environment Chapter**

## **POLICY 6.6: WATER CONSERVATION**

- **Drought-tolerant native species**
- **Alternative irrigation methods**
- **Education on measures such as mulch and drip irrigation to reduce water consumption**
- **Incentives for buildings and facility design which minimizes water usage**
- **Reuse of gray water for irrigation.**



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Water conserving.**
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Less pollution.**

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- 3. Requires no mowing,  
Reduced emissions.**



# **Environment Chapter**

## **POLICY 1.2: PROTECT SURFACE WATER**

- **Stream Setback Regulations**
- **Low-impact uses of riparian areas**
- **Permit and maintain water structures**
- **Alignment with Kansas Water Plan:**
  - **Native plants**
  - **Fewer chemicals**
  - **Separate livestock from streams**



## **Artificial Turf :**

- 1. Requires less water,  
Water conserving.**
- 2. Requires no chemicals,  
Less pollution.**
- 3. Requires no mowing,  
Reduced emissions.**





# **Environment Chapter**

## **POLICY 3.3: Reduce Emissions**

- **Minimize power usage**
- **Promote alternate fuel sources**
- **Use environmentally friendly building design and mechanical systems**
- **Education and outreach programs**



# **Environment Chapter**

## **POLICY 3.3: GREEN INFRASTRUCTURE**

**“Green infrastructure strategies actively seek to understand, leverage, and value the different ecological, social, and economic functions provided by natural systems in order to guide more efficient and sustainable land use.”**





# Code Options: Prohibited

## 20-1007 Alternative Compliance (b) Approval Criteria

Only living plant materials may be approved for landscaping with Alternative Compliance.

The use of artificial plants such as turf, flowers, shrubs or trees, shall not be permitted.



# Code Options: Prohibited

## 20-1009 Landscape Material Standards (b) Artificial Plants

No artificial plants shall be used to meet any standards of this section. Artificial plants include, but are not limited to, artificial (synthetic) turf, flowers, shrubs and trees.



# **Code Options: Limited**

## **20-1007 Alternative Compliance**

### **(b) Approval Criteria**

**Only living plant materials may be approved for landscaping with Alternative Compliance except that artificial (synthetic) turf may be used in limited circumstances as noted below and with the following standards:**

- 1. Border to define landscape area not > 18”**
- 2. May not be installed in the City right-of-way.**



# Code Options: Permitted

## 20-1009 Landscape Material Standards (b) Artificial Plants

**No artificial plants shall be used to meet any standards of this section with the exception of synthetic turf. The following standards apply to the use of synthetic turf as a landscape material:**



# **Response to Applicant's letter**

## **8/19/2011**

- **Approval of synthetic turf playing fields.**
- **Changing condition with Frontier Apts. (pg1)**
  - **Playing fields:  
synthetic turf as surfacing material.**
  - **Frontier Apartments:  
synthetic turf as landscaping material.**



# **Response to Applicant's letter**

## **8/19/2011**

**•Use of artificial turf protects the environment. (pg 3)**

- Artificial turf does not require mowing or chemicals and requires less watering; however, it does not provide any of the environmental benefits associated with living plants.**



# **Response to Applicant's letter**

## **8/19/2011**

- **High quality materials. (pg 4)**
- **Staff agrees that high quality materials should be used.**



# **Response to Applicant's letter**

## **8/19/2011**

- Decreased maintenance cost will improve economic vitality of community as well as improving the environment. (pg 4)**
- Staff does not believe that the use of artificial turf will improve the economy of the community—perhaps of the individual project.**





# **Response to Applicant's letter**

## **8/19/2011**

- Artificial turf does not produce yard waste, reduced emissions from trash trucks. (pg 8)**
  - Yard waste would still accumulate from shrubs and trees (leaves).**
  - Grass clippings should be mulched and left on the site.**
  - City program recycles grass clippings into compost.**



# **Response to Applicant's letter**

## **8/19/2011**

- Green Infrastructure is not consistent with urban development. (pg 8)**
- Use of natural systems to provide functions: trees to filter air pollution and buffer sounds; vegetation to provide oxygen, sequester carbon dioxide, and reduce heat island effect, streams and swales to carry stormwater.**



## **Staff Recommendation:**

**Staff recommends denial of the requested amendment, TA-4-6-11, to allow synthetic turf as a landscape material and recommends that 'low maintenance' landscaping be utilized to meet the need for more sustainable landscaping practices.**



## **Staff Recommendation:**

### **20-1009 Landscape Material Standards (b) Artificial Plants**

**No artificial plants shall be used to meet any standards of this section. Artificial plants include, but are not limited to, artificial (synthetic) turf, flowers, shrubs and trees.**



**LANDSCAPING PRACTICES COMPARISON CHART:**

	Synthetic Turf	Low Maintenance Landscaping	Traditional Lawn
Low water usage	✓	✓	
No Pesticide usage	✓	✓	
No Fertilizer	✓	✓	
No mowing	✓	✓	
Pervious	✓	✓	✓
Filters pollutants		✓	✓
Provides Habitat		✓	✓
Provides Oxygen		✓	✓
Absorbs Carbon Dioxide		✓	✓
Reduces Heat Island		✓	✓
Adds to Heat Island	✗		

## Compliance with *Horizon 2020*

“Natural vegetation and large mature trees in residential areas add greatly to the appearance of the community as a whole and should be maintained”. (Policy 5.1, page 5-19)

“Site design and building features shall be reflective of the quality and character of the overall community and incorporate elements familiar to the local landscape”. (page 6-2)