

**Topic:** Site Design Standards; Landscaping  
**Resource Type:** Regulations  
**State:** Kansas  
**Jurisdiction Type:** Municipal  
**Municipality:** City of Lenexa  
**Year (adopted, written, etc.):** 2001  
**Community Type - applicable to:** Urban; Suburban  
**Title:** City of Lenexa Landscaping & Site Design Standards Ordinance  
**Document Last Updated in Database:** April 12, 2017

### ***Abstract***

This ordinance establishes landscaping standards for new site development in accordance with conservation and preservation goals. It dictates landscaping techniques, as well as strict regulations for the removal of existing vegetation.

### ***Resource***

#### ARTICLE 4-1-D SITE DESIGN AND DEVELOPMENT STANDARDS

-----

#### Section 4-1-D-2 LANDSCAPING, BUFFERING AND SITE DESIGN.

A. Purpose And Intent: The purpose and intent of this Section is to promote the health, safety and welfare of existing and future residents by establishing minimum standards for the preservation, installation and continued maintenance of trees, landscaping and buffering. The regulations are intended to preserve and protect existing vegetation and trees, to promote water conservation by encouraging the use of Xeriscape landscape principles and the use of drought-tolerant landscape material, to enhance the value and appearance of local properties by more effectively buffering incompatible land uses, to reduce air and noise pollution; to maintain and improve environmental conditions by providing air purification, oxygen regeneration, ground water recharge and decreased storm water runoff, noise and glare, to increase the energy efficiency of buildings through the control of wind, sun and shade, and to improve the aesthetic appearance of all development by requiring landscaping and buffering that blends with and enhances the natural and built environment and by establishing minimum landscaping, buffering and site design standards.

B. Applicability: The standards of this Section shall apply to all new development and to expansions and modifications of existing development as specifically outlined in this Code.

All landscaping, buffering and site design features required by this Section and previous regulations shall be continuously maintained according to the standards of this Section.

C. Deviations From Strict Compliance:

1. Approval: It is recognized that development constraints and site conditions vary greatly among sites. The Planning Director shall, therefore, be authorized to approve landscape plans that deviate from strict compliance with the provisions of this Section including the applicability of any section to a particular development if it is determined that the purpose and intent of this Section is met. Any proposed deviations shall be clearly identified on the proposed landscape plan which shall be accompanied by a written description of the proposed deviations and an explanation of how the purpose and intent of this Section will be met by the proposed plan.

2. Appeal: The decision of the Planning Director may be appealed to the Planning Commission. In reviewing the appeal, the criteria to be considered by the Planning Commission shall include, but not be limited to:

a. Purpose And Intent Of The Code: Is granting of the deviation in compliance with the general purpose and intent of the City's landscape, buffering, and site design regulations? Does the proposed plan reflect a design that complies with Code requirements to the greatest extent possible and offer alternative methods for addressing specific functions of the landscape requirements of which a deviation is being requested?

b. Impacts On Adjacent Properties: Will granting of the deviation adversely affect neighboring property owners or residents?

c. Safety: Will granting of the deviation adversely affect safety? For location of plant material, a safe sight-distance setback is required, and plant locations should not encroach upon existing right of way or potential right-of-way needs.

d. Site Constraints: Are there unique site constraints that justify the deviation from the requirements of this Section?

e. Promotion Of High Quality Or Unique Design: The proposed landscape, buffering, and site design should be of high quality and must integrate aesthetically with the design of the primary buildings on-site, established streetscape and development plan for the surrounding area.

D. Agricultural Exemption: Unless otherwise indicated, agricultural uses in the AG District shall be exempt from all of the standards of this Section.

E. Landscape Plans: Landscape plans shall be sealed by a landscape architect licensed to practice in the State of Kansas. This requirement may be waived by the Planning and Development Director on smaller projects such as expansions, revocations, and sign installations. A waiver shall be based on evaluation of the complexity of the plan, including:

1. The overall cost and scope of the necessary landscape improvement;
2. The need for special functional designs for screening and buffering;
3. The ability to expand on existing landscape design versus creating new elements and treatments.

F. Site Design Criteria: Proposed landscape plans shall be reviewed for compliance with the standards of this Section and for compliance with the following general design principles:

1. All elements of the site plan shall be arranged to create a safe, functional, convenient, healthful, durable and attractive living environment for residents, tenants, workers and occupants of properties.

2. Environmental features and views shall be preserved to the greatest extent possible through proper site layout and design.

3. Site grading shall be designed and implemented to retain as much existing tree cover as possible, make use of existing natural drainageways, avoid increased runoff and erosion and provide buffering of objectionable noise and views. The land shall be contoured to transition smoothly and shall enhance the overall site design.

4. Existing trees, shrub and ground cover which will contribute to the living environment shall be preserved to the greatest extent possible.

5. Extreme temperature, sunlight, wind and other climatic factors shall be moderated by appropriate site layout and design.

6. Safe and convenient pedestrian and vehicular circulation shall be provided.

7. Buildings shall be located to ensure the provision of adequate open space for outdoor living areas, facilities, services and amenities and to provide natural indoor light, air and privacy. All buildings, parking lots and other structures shall be located to integrate with the natural topography and to avoid deep cuts and fills, excessive foundation wall depth, unnecessary steps and steep access gradients.

G. Xeriscape Landscape Techniques: The City encourages the use of Xeriscape landscape practices as a means of minimizing the need for supplemental watering. The following techniques are strongly encouraged:

1. Using plant materials with lower moisture requirements (low water use);

2. Selecting plants on the basis of specific slope, aspect, soil and microclimate conditions;

3. Using native and adapted plant species;
4. Minimizing the amount of irrigated turf area;
5. Planting and designing slopes to minimize runoff;
6. Separating irrigation zones according to plants' water requirements and using drip/trickle irrigation systems to reduce evaporation;
7. Emphasizing soil improvement by conserving topsoil, deeply loosening soil and incorporating organic matter and amendments based on soil tests; and
8. Using mulch in planting areas to reduce weed growth, promote soil cooling and reduce evaporation.

H. Vision Obstructions At Intersections: Landscape plans shall comply with requirements of subsection 4-1-B-26-B-7-d of this Chapter.

I. Tree And Vegetation Protection: Site plans and plats shall be designed to preserve existing trees and vegetation to the greatest extent possible and shall seek to incorporate existing significant stands of trees as well as individual trees. Sensitivity to site grading, storm drainage, building location and orientation and parking lot configuration shall be demonstrated by the developer to ensure tree and vegetation preservation. The intent of these regulations is to recognize the need to alter the landscape during site development activities, while setting out standards necessary to ensure tree preservation to greatest extent possible.

1. Trees And Vegetation To Be Preserved:

a. Plat Or Plan Review Determination: Where a proposal to remove desirable existing trees and vegetation could be avoided through modification of site layout and design or where proposed tree and vegetation removal would be detrimental to a site's overall appearance, function or environmental condition, the Planning Director may require preservation of such trees and vegetation. The Planning Commission shall have the authority to review and evaluate the site plan proposal and advise the applicant to proceed forward or seek alternative site designs to ensure improved preservation of existing trees.

b. Tree Or Vegetation Removal Without Approved Plat Or Plan: (Reserved for future use.)

2. Tree Credits: When existing trees are preserved, tree credits shall be granted and applied in accordance with the following criteria:

a. Criteria: The Planning Director shall have the authority to award tree credits at the time of final plan approval or, for the R-1 Zoning District, at the time of issuance of a certificate of occupancy, after consideration of the following factors:

(1) Health, appearance and desirability of the species in the existing location.

(2) Function of the tree in providing erosion control, shade, wind protection, buffering and aesthetic enhancement.

(3) Ability of the tree to withstand the impacts of construction.

b. Amount Of Credit: Trees that meet the tree credit criteria of subsection I-2-a of this Section shall be credited as follows:

(1) Trees that measure from 2 to 10 inches shall be credited on a 1-for-1 basis. Trees that measure greater than 10 inches shall be credited on a 2-for-1 basis.

(2) Tree credits shall not exceed 50 percent of the number of required trees.

c. Application Of Tree Credit: Tree credits shall only be given for those trees that are of a type and size and in a location that satisfies 1 or more of the requirements of this Section.

### 3. Required Documentation Of Existing Trees:

a. Photogrammetric Documentation: Preliminary and final plat applications and conceptual and preliminary plan applications shall be accompanied by plans prepared from aerial photos and on-site verification or from surveys, which include identification of trees and significant vegetation, such as that within drainageways and on steep slopes by common names of primary vegetation types. Additionally, trees which are proposed to be removed and which are estimated to be greater than 10-inch caliper shall be identified on the plats and plans by common name. The purpose of this documentation is to allow the planning staff an opportunity to review the impact of site design against the loss of existing trees.

#### b. Tree Survey:

(1) At the time of final plan application, a tree survey shall be submitted which locates, identifies by common name and indicates by caliper size each tree greater than 10-inch caliper. Plans shall clearly indicate, by symbol or other method, which trees are proposed to be saved and which are proposed for removal. Exceptions may be permitted by the Planning Director for trees that will not be removed and will not be adversely affected by site development and for which tree credits are not desired, as long as they are graphically located on the plan based on data from aerial photos and site verification.

(2) Credits for existing trees will only be considered upon submission of a tree survey that shows the location, identification by common name and caliper size of each existing tree to be saved and for which credit is desired.

4. Protection Of Existing Trees: Existing trees and vegetation that are to be saved shall be protected from all construction activities, including earthwork operations, movement and storage of equipment and materials and dumping of toxic materials. A minimum protection zone shall be established by the installation of temporary fencing around existing vegetation to be preserved, placing the fencing no closer to the trees than their drip lines, and this information shown and noted on the plans. Protective fencing shall be maintained throughout the construction period. Alternative protection measures may be approved by the Planning Director. Construction details which indicate special techniques that will be employed to save trees shall be required for all existing trees for which credit is desired.

J. Street Trees: Street trees shall be provided in all single-family and duplex subdivisions with average lot sizes of under 1 acre as follows:

1. Number: It is the intent of this Section that one (1) street tree shall be planted for every 40 linear feet of public or private street frontage. However, the City acknowledges and incorporates into the formula below that there will be a need to vary from this requirement due to factors such as the location of driveways, utilities and intersection visibility requirements.

2. Placement: Required street trees shall be installed within a landscape easement or within the right of way abutting the street. The street trees need not be placed at 40-foot intervals, but they must be placed fairly evenly along the street frontage. The Parks and Recreation Director shall have the authority to decide the final location of street trees.

3. Tree Selection: The Parks and Recreation Director shall decide the types of street tree species with allowance made for input from the property owner.

4. Landscape Easements: All owners of land within single-family and duplex projects requiring street trees shall grant to the City a 15-foot deep landscape easement along all right-of-way lines, as a part of any final plan or plat approval.

5. Funding: At the time of final plat or final plan approval, the landowner shall provide the City with total payment as calculated by the formula set forth below. The fee shall be deposited in the Lenexa Street Tree Fund. Payments into the Lenexa Street Tree Fund payments are nonrefundable even if the number of trees planted is less than the number identified in the credit. Similarly, there will be no additional charge for replacement street trees planted by the City. The following formula will be used to calculate the required street tree fee:

Total linear feet of public or private street frontage divided by 50. The resulting number shall be multiplied by a dollar amount adopted by the Governing Body\*, which amount shall represent the costs to the City of acquiring and planting the street trees.

\*See Title 2, Article 12-B of the City Code.\*

While it is the intent of this Section to space the trees a maximum of every 40 feet, the formula for calculating the fee due acknowledges the necessity for variances by dividing the total linear feet of street frontage by 50, rather than 40. This is being done in an effort to prevent the accrual of surplus funds in the Lenexa Street Tree Fund.

6. Timing: The Parks and Recreation Director shall decide when the street trees are planted, which will generally be the first appropriate planting season after the danger of construction related damage is past.

7. Waiver: If the landowner is the developer of a multi-phase residential subdivision, the Planning and Development Director may waive the provisions of subsection 4-1-D-2-J-5 of this Section for a subsequent final plat or final plan approval, after the street tree payment for the initial final plat or final plan approval is made; provided, the landowner is required to furnish the City a letter of credit or other surety, approved by the City Attorney, in an amount sufficient to ensure compliance with subsection 4-1-D-2-J-2 of this Section, as determined by the Parks and Recreation Director.; Any letter of credit shall be on a form acceptable to the City and must be approved by the City Attorney prior to acceptance and recording of the plat.

Letters of Credit: Letters of credit required under this Section shall not exceed a total of four (4) years from the date of the final plat or plan approval. The minimum term for any letter of credit during the four-year term shall not be less than two years, unless otherwise approved by the City Attorney. Any street tree letter of credit less than four years in length must be renewed with a new letter of credit thirty (30) days prior to the expiration of the letter of credit. In the event a street tree letter of credit is not renewed prior to the thirty (30) days of the expiration, the City may draw on the entire letter of credit. Prior to any expiration date, the City may provide a courtesy letter to the developer advising them of the upcoming expiration date. Failure to provide a courtesy letter shall not be deemed a waiver by the City or any of the terms and conditions of this Section nor otherwise excuses the landowner from the terms and conditions of this Section.

Annually, the City shall draw from the letter of credit at least twenty-five percent (25%) of the total payment as determined in 4-1-D-2-J-5.

8. Street Tree Fund Surplus: It is acknowledged that factors such as interest earned, tree prices and higher-than-expected survival rates of street trees will occasionally result in the accrual of surplus funds in the Lenexa Street Tree Fund. Any surplus of funds remaining in the Lenexa Street Tree Fund after all plantings required by this Section have been made may be spent on other street tree plantings in the Street Tree Fund Zone in which the funds were collected. The Parks and Recreation Director shall have the authority to expend any surplus in accordance with this subsection.

9. Street Tree Fund Zones: The following Street Tree Fund Zones are hereby established and are shown on the Street Tree Fund Zone Map below:

Zone #1: East of Renner to the east City limits and area west of Renner, south of K-10.

Zone #2: West of Renner (north of K-10) to K-7.

Zone #3: K-7 west to City limits.

K. Site Trees: In addition to required street trees, 2 yard trees will be required for each single-family or duplex lot.

L. Perimeter Plantings: Plantings as specified in Tables 1 and 2 shall be provided around the perimeter of each development site, except single-family and duplex lots, based on the orientation of property and the classification of the road(s) to which it is adjacent. Perimeter plantings may be located anywhere between the property line and adjacent pavement or structure, in a landscaped area of the minimum depth designated, however, the minimum number of shade trees along street frontages should be located within 15 feet of the right of way or as close to the right of way as site features allow. The minimum depth of the perimeter landscaped area along interior lot line shall be 10 feet. Where the requirements of a land use buffer along the same property line exceed those of the perimeter plantings, the land use buffer requirements shall supersede.

Table 1 - Perimeter Plantings Along Street Frontages

Per 100 Lin. Ft. Adjacent To

Parkway  
(minimum 50 ft. depth, or as designated)

Freeway  
(minimum 20 ft. depth)

Arterial  
(minimum 25 ft. depth)

Collector  
(minimum 25 ft. depth)

Local  
(minimum 20 ft. depth)

Building or Open Area

3 shade trees  
3 ornam'l trees  
50 shrubs  
300 sf bed\*

2 shade trees

2 shade trees  
1 ornam'l tree  
16 shrubs  
100 sf bed\*

2 shade trees  
1 ornam'l tree  
12 shrubs  
75 sf bed\*

2 shade trees

Parking Lot

As above and  
ADD  
shrubs or berm to 3 ft. for continuous screening

As above and  
ADD  
shrubs or berm to 3 ft. for continuous screening

As above and  
ADD  
shrubs or berm to 3 ft. for continuous screening

As above and  
ADD  
shrubs or berm to 3 ft. for continuous screening

As above and  
ADD  
shrubs or berm to 3 ft. for 75% screening

Service Area  
(loading docks, outside storage and activities)

As above and  
ADD  
evergreen trees, shrubs, and/or berm to accomplish 100% screening

As above and  
ADD  
evergreen trees, shrubs, and/or berm to accomplish 75% screening

As above and

ADD  
evergreen trees, shrubs, and/or berm to accomplish 75% screening

As above and  
ADD  
evergreen trees, shrubs, and/or berm to accomplish 75% screening

As above and  
ADD  
evergreen trees, shrubs, and/or berm to accomplish 50% screening

\* Decorative planting bed with flowers, other color, small shrubs and nonturf ground covers.

Notes To Table 1:

1. A 3 foot high decorative wall of a design compatible with the architecture of the primary structure may also be used in lieu of berms or shrubs for parking lot screening.
2. Service area screening shall be designed to meet above criteria after 5 years of normal growth.

Table 2 - Perimeter Plantings Along Lot Lines

Per 100 Lin. Ft. Adjacent To:
Side, At Street
Side, At Rear
Rear
Building
1 shade tree
1 shade tree
1 shade tree
Parking Lot
1 shade tree

9 shrubs

1 shade tree

9 shrubs#

1 shade tree

9 shrubs#

Service Area

As above and

ADD

evergreen trees and shrubs to accomplish 50% screening

As above and

ADD

evergreen trees and shrubs to accomplish 50% screening#

As above and

ADD

evergreen trees and shrubs to accomplish 50% screening#

# May be reduced or deleted adjacent to service area or other nonpublic areas or obscured views.

M. Internal Parking Lot, Landscaped Areas: Every parking lot of over 10 spaces and 3,500 square feet shall contain internal landscaped areas based on the following design criteria:

1. Amount: The following percentage of the total parking lot area shall be dedicated to internal landscaped areas. Where there is more than 1 district parking area on a site, this amount should be provided for each lot. Where multiple lots are provided on a multi-use site, the lots may reflect the predominant use for which the spaces serve.

For multi-family projects - 10 percent of total parking lot area.

For office and commercial sites - 7.5 percent of total parking lot area.

For industrial or warehouse sites - 5 percent of total parking lot area.

The total parking lot area shall be measured along the perimeter of the lot including all parking spaces, access drives, cruise lanes, and landscaped islands within the perimeter and at the corners of the lot. The total parking lot area shall not include loading and service areas, but shall include drive-up areas for customer service and drives and maneuvering areas that are jointly used by parking lot and service traffic.

2. Design: Islands satisfying this requirement shall be of a minimum of 8 feet in width and 125 square feet in area. A minimum of 1 tree shall be planted per 300 feet of overall internal landscaped area, with at least 1 tree planted in each island. The remainder of the island shall be landscaped with additional trees, shrubs, ground cover or turf. Plantings should anticipate foot traffic patterns, be used to discourage foot traffic where dictated by safety concerns and shall provide adequate visibility for the safety of pedestrians and vehicles.

3. Location: Islands should be designed in locations based on the priority of: a) defining major drives and cruise lanes, b) delineating the end of parking rows, c) at aisle intersections, and d) internal to the parking rows themselves.

N. Land Use Buffers: Land use buffers are intended to enhance community appearance and welfare by protecting residents and visitors from the traffic, noise, glare, trash, activity, vibration, odor, visual disorder and other adverse or harmful effects associated with some areas.

1. Determining Required Land Use Buffer Design Type: An appropriate land use buffer shall be provided between uses based on the intensity of the uses as defined below. The first step in determining the buffer required is to calculate the numerical difference between the land use intensity (LUI) factors of the 2 adjoining uses from Table 3.

Table 3 - Land Use Intensity Factor

Land Use

LUI Factor

Residential: Less than 4 units per acre

1

Residential: 4-8 units per acre

3

Residential: 8-16 units per acre

6

Residential: 16-36 units per acre

7

Office: Less than .50 ISR and 2 stories or less

5

Office: .50 - .65 ISR and 2 stories

6

Office: Over .65 ISR or over 2 stories

7

General Commercial: Less than .65 ISR

7

General Commercial: .65 ISR or greater

8

Heavy Commercial

9

Warehouse/Light Manufacturing

8

Manufacturing

9

Notes To Table 3:

1. ISR is the impervious surface ratio; the amount of land covered by buildings and pavement.

2. Office includes office and medical office uses, and the office fronts of office/warehousing buildings. Special uses in office zones may require additional buffering, based on their intensity.

3. "General Commercial" is defined as uses allowed in CP1 and CP2 Districts that do not have outside activities such as night use drive-up windows, gasoline sales, significant late night parking lot activity or similar impacts adjacent to the lower intensity land use.

4. "Heavy Commercial" is defined as uses requiring CP3 and CP4 zoning, and all other commercial uses not included above.

5. For vacant land, the land use intensity shall be assumed to be based on current zoning or land use plan designation, whichever is the most intense.

The second step in determining a land use buffer requirement is to adjust the numerical difference between land use intensities for any intervening road, drainage or utility right of way or easements that separate the sites. The difference between LUI factors shall be reduced as noted on Table 4. The resulting final land use intensity difference is then used to determine the buffer design type in Table 5.

Table 4 - Credit For Intervening Right Of Way

Right-Of-Way Or Easement Type Of Width

Reduction Of LUI Difference

Local Road

1

Collector Road

2

Arterial Road

4

Limited Access Highway

6

Utility Or Drainage Easement

20 feet to 50 feet

1

51 feet to 100 feet

2

101 feet to 150 feet

3

151 feet or more

4

Table 5 - Land Use Buffer Design Type

Buffer Type

Planted Per 100 Lin. Ft. Of Buffer

(LUI diff.)

Width (ft.)

Shade Trees

Evergreen

Shrubs

1

10

1

2

10

2

10

1

3

15

3

20

2

6

20

4

30

3

8

25

5

40

4

10

35

6

50

5

12

40

7

60

6

14

45

8

70

7

16

50

#### Notes To Table 5:

1. When a 6-foot high fence or wall, or 5-foot high berm is incorporated into a buffer of design Type 4 or greater, the buffer width may be reduced by 10 feet, the number of tree and evergreen plantings may be reduced by 30 percent and the number of shrub plantings reduced by 50 percent. However, this credit may not be granted in cases where topography negates the added benefit of a fence, wall, or berm.

2. A 6-foot high fence or wall, or 5-foot high berm shall be incorporated into the buffer when vehicular areas or similar outside activity areas of the higher intensity use are adjacent to a residential use. This requirement may be waived where topographic features visually separate the uses, or where the higher intensity area is adjacent to the parking area of a multi-family project of relatively similar intensity.

3. On buffers of design Type 4 or greater, ornamental or evergreen trees may be substituted for 1/3 of the required shade trees.

#### 2. Exemptions And Reductions:

a. Exemption For HBD District: No land use buffer shall be required between land uses within the HBD District. However, uses in the HBD District shall be buffered from adjoining districts to the greatest extent physically possible.

b. Reductions: The Planning Director may recommend, and the Planning Commission may approve, reductions of the land use buffer requirements based on the specific uses, building orientations, topographic features, or other unique characteristics of the adjoining uses.

c. Relationship To Other Requirements: When the requirements of a land use buffer exceed those of other requirements along a property line, the land use buffer requirements shall supersede. Any other plantings required in the area of a land use buffer may be considered in satisfying the requirements of a land use buffer.

#### 3. Design And Use Of Land Use Buffers:

a. Existing Plant Material: The use of appropriate existing plant material is strongly encouraged in land use buffers. Approved existing trees and natural ground cover should be retained where possible by avoiding scraping, grading, sodding and other construction activity within the land use buffer. Where the land use buffer standards call for additional

trees or shrubs to be installed in an existing natural area, it should be done in a manner which minimizes disturbance to existing plants. In determining whether existing trees and vegetation should be interpreted as satisfying the land use buffer standards, the Planning Commission shall consider the following factors:

- (1) The quality of the vegetation being preserved;
- (2) The effectiveness of the visual screening that will be provided;
- (3) The extent to which the proposed buffer makes use of existing topography and vegetation; and
- (4) The relocation to the land use buffer area of healthy native and existing natural vegetation which would otherwise be removed from areas of the site to be developed.

b. Walls And Fences: When walls or fences are used to meet the land use buffer requirements, they shall be of high quality construction and design appropriate to the surrounding uses and structures. Fences between residential uses may utilize high quality wood design, preferably with masonry columns in more visible locations. Walls adjacent to commercial uses should generally be masonry construction, however, wood/masonry designs may be approved adjacent to residential uses.

Fences or walls should generally be located in the middle of the buffer area, or adjacent to the higher intensity use. A gate shall be provided to allow for maintenance of the buffer area on the opposite side of the fence by the landowner.

c. Berms: The use of well-designed berms is encouraged in land use buffer designs, although due to topographic constraints and the existence of vegetation, berms may not be desirable for portions of a land use buffer. When used, berms should be designed to integrate with the natural topography of the site.

d. Compatibility Of Landscape Materials: Supplemental buffer plantings shall be compatible with the existing vegetation within the buffer area.

e. Development Within Land Use Buffers: Land use buffers may contain pedestrian, equestrian or bike trails, provided, that the total width of the buffer is maintained. In no event shall structures or uses, such as, but not limited to, playfields, stables, swimming pools, golf courses, tennis courts, parking lots and vehicular use areas, equipment storage and other open storage, or buildings be permitted within land use buffers.

#### O. Landscaping Of Monument Signs:

1. Minimum Sign Monument Landscaped Area: An area equal to 3 times the size of the sign monument shall be landscaped using ornamental trees and shrubs, and ground

covers, rock beds or other decorative ground treatments contrasting with the lawn or other predominant ground cover on the site.

2. Minimum Landscape Material: As a minimum, the monument sign landscaped area shall include as a minimum:

a. One shade tree per 500 square feet of required landscaped area or additional major portion thereof.

b. One ornamental tree per 200 square feet of required landscaped area or additional major portion thereof.

c. One shrub per 20 square feet of required landscaped area or additional major portion thereof.

3. Landscape Design Concept: The landscaped area shall surround and integrate with the sign monument, and shall use various materials of different heights and textures to provide design interest and incorporate the sign into the overall landscape program. Street trees and additional shade trees, where required, should be located so as to accent the sign while assuring visibility. Ornamental trees should also be used for accent, and to break up or screen the height of freeway signs. Shrubs should be massed to provide 3-dimensional impact in contrast to flat surfaces of the sign monuments.

4. New Monument Signs On Existing Sites: When a new monument sign is installed on a site of less than 330 feet of road frontage, the entire frontage on which the sign is located shall be brought up to current standards for perimeter plantings along that frontage.

P. Site Feature Buffering And Screening: Site features, such as but not limited to the following, shall be effectively screened from the view of roadways and adjacent sites by berms, fences, walls and/or plant material.

1. Trash Receptacles: Trash receptacles shall be screened from view by walls or fences in the residential zoning districts and by masonry walls in all other districts. The fence or wall shall be a minimum of 6 feet in height and shall provide complete visual screening and be compatible in material and color with the principal structure on the lot.

2. Permitted Outdoor Storage: Outdoor storage areas that are permitted by this Code shall be screened from view by privacy fences or walls with a minimum height of 6 feet in accordance with the fence regulations of this Code.\* Nonopaque fencing, such as chain-link, may be used to satisfy the requirements of this Section if sufficient plant material is provided to effectively screen the storage area from view.

\*See Subsection 4-1-B-24-F-5 of this Chapter.\*

3. Service And Loading Areas: Service and loading areas will be screened by perimeter plantings or, when required, by land use buffers, in order to better screen these areas, the concentration of required plantings may be necessary adjacent to these features.

4. Ground-Mounted Utility Boxes, Meters And Mechanical Equipment: Ground-mounted utility boxes, meters, and mechanical equipment shall be screened from view from off-site by landscaping or architectural elements compatible in material and color with the primary structure. Screening may be waived in rear and rear side yard locations where adjacent to other service or mechanical areas, or where not subject to primary views from off-site. This requirement shall not apply in Agriculture and Single-Family Residential Zoning Districts.

5. Satellite Dish Antennas: Satellite dish antennas shall be screened in accordance with the standards of subsection 4-1-B-24-F-11 of this Chapter.

Q. Tree And Landscape Material Standards: The following standards shall be considered the minimum required tree and landscape material standards:

1. General: Trees and plants used in landscape design pursuant to this Section shall, to the greatest extent possible, be drought tolerant, appropriate for the ecological setting in which they are to be planted, have noninvasive growth habits, have low maintenance characteristics and provide high-quality appearance, be commercially available and be otherwise consistent with the purpose and intent of this Section.

2. Plant Quality: Plants installed pursuant to this Section shall conform to or exceed the plant quality standards of the most recent edition of American Standard for Nursery Stock, published by the American Association of Nurserymen. Plants shall be nursery grown and adapted to the local area.

3. Artificial Plants: No artificial plants or vegetation shall be used to meet any standards of this Section.

4. Tree Diameter And Height:

a. Shade Trees: Shade trees planted to satisfy the standards of this Section shall have a minimum caliper (diameter) of 2 to 2 1/2 inches measured 6 inches above the ground. Shade trees shall be of a species that reaches a minimum height of 30 feet at maturity.

b. Ornamental Trees: Ornamental trees planted to satisfy the standards of this Section shall have a minimum height of 6 to 8 feet. Ornamental trees shall be a species that has flowers, colored foliage, or a unique growth habit or other distinguishing characteristic that adds variety to the overall landscape plan.

c. Evergreen Trees: Evergreen trees planted to satisfy the standards of this Section shall have a minimum height of 5 to 6 feet.

d. Upright Evergreens: Upright evergreens planted to satisfy the standards of this Section shall have a minimum height of 5 to 6 feet.

5. Deciduous And Evergreen Shrubs: Shrubs required as part of a land use buffer or adjacent to parking lots in perimeter plantings shall be a minimum height of 18 to 24 inches at the time of planting. Other shrubs may be of a size determined by the applicant unless otherwise indicated by this Code or as required by the Planning Director.

6. Ground Treatment: The ground area within required landscape areas shall receive landscape treatment and present a finished appearance and reasonably complete coverage upon planting. As a minimum, all landscaped areas shall be grassed except as specifically allowed for in this Section. The following standards shall apply to the design of ground treatment.

a. Ground Cover: Ground cover appropriate for the area may be planted in lieu of turf grass. Ground cover shall be of a size and spacing to provide a minimum of 50 percent coverage after the first full growing season and complete coverage at maturity. Edging shall be provided for all ground cover.

b. Mulch: Mulch shall be installed and maintained at a minimum depth of 3 inches on all planted areas except where ground cover plants are fully established. Mulch may be used as a permanent ground treatment in those landscape designs where ground cover or grass is inappropriate. Rock mulch may be used in a limited way when appropriate to a design concept and as a ground treatment in areas where drainage is a problem; provided, that the use of rock adjacent to buildings shall be minimized.

c. Lawn And Turf Grass: Turf areas shall be planted with species suitable as permanent lawns in Lenexa. The turf area located between the street curb line and the building line shall be sodded in the RE, RP-E, R-1 and RP-1 Districts. Other turf areas shall be sodded unless otherwise approved by the Planning Director. In areas where grass seed is used, maintenance shall be provided until coverage is complete. Use of appropriate drought-tolerant ground cover to reduce lawn and turf grass areas is encouraged when approved through the planning process.

d. Existing Vegetation Areas: Ground treatment may not be required in areas of existing vegetation.

R. Installation, Irrigation, Maintenance And Replacement: The following standards shall be considered the minimum required installation, maintenance, irrigation and replacement standards for all trees and landscape material:

1. Installation: All landscaping and buffering shall be installed according to sound nursery practices in a manner designed to encourage vigorous growth. The Planning Director shall require soil improvement measures, including, but not limited to, minimum topsoil depths, where deemed necessary to ensure healthy plant growth.

2. Certification Of Installation: Prior to the issuance of a certificate of occupancy, the landowner shall submit a certificate of compliance which verifies that the plant material has been installed in compliance with the approved landscape plan.

a. Form Of Certification: The certificate of compliance shall:

(1) Be submitted to the Planning Director prior to issuance of a certificate of occupancy.

(2) Be submitted on forms available from the Department of Planning and Development.

(3) Bear the seal of a landscape architect or the notarized signature of the landscape contractor.

(4) State that the landscape architect or the landscape contractor personally inspected the site.

(5) State that the landscape architect or the landscape contractor certifies that landscaping and buffering was properly installed and meets all requirements of the approved landscape plan and of this Section.

(6) State that the landscape architect or the landscape contractor understands that any misrepresentations or misstatements in the certificate of compliance shall constitute a violation of this Section.

(7) Contain such other information as required by the Planning and Development Department which is reasonable and necessary to a determination that landscaping is in compliance with this Section.

3. Irrigation: Landscape areas shall be irrigated as necessary to maintain required plant materials in good and healthy condition. Irrigation systems shall comply with the following standards:

a. All landscape areas shall be provided with a readily available water supply with at least 1 outlet within 100 feet of the plants to be maintained. The use of nonpotable water for irrigation purposes shall be encouraged.

b. No permanent irrigation system is permitted for an area set aside on approved plans for preservation of existing natural vegetation.

c. Temporary irrigation systems installed pursuant to acceptable Xeriscape landscape practices may be used to meet the standards of this Section.

d. Irrigation systems shall be continuously maintained in working order and shall be designed so as not to overlap water zones or to water impervious areas.

e. Whenever practical, irrigation systems shall be designed in zones to apply water onto shrub and tree areas on a less frequent schedule than those irrigating lawn areas. When technically feasible, a rain-sensor switch shall be installed on systems with automatic controllers.

f. No irrigation system shall be installed or maintained abutting any public street which causes water from the system to spurt onto the roadway or to strike passing vehicular traffic.

g. The use of irrigation quality effluent or re-used water shall be encouraged.

4. Maintenance: Landowners and their successors in interest shall be jointly and severally responsible for the following:

a. Regular maintenance of all landscape areas in good condition and in a way that presents a healthy, neat and orderly appearance. All landscaping shall be maintained free from disease, pests, weeds and litter. This maintenance shall include weeding, watering, fertilizing, pruning, mowing, edging, mulching or other maintenance, in accordance with acceptable horticultural practices;

b. The repair or replacement of landscape structures (e.g., walls, fences) to a structurally sound condition and original appearance;

c. Perpetual maintenance to prohibit the reestablishment of undesirable and harmful species within landscape and preservation areas;

d. Continuous maintenance of the site; and

e. The regular maintenance, repair or replacement of any plant material, screening or buffering required by this Section in conjunction with approved plans. Any vegetation which is required to be planted or preserved by this Section shall be replaced with the largest available equivalent vegetation. Preserved trees for which credit was awarded and which subsequently die shall be replaced on a caliper for caliper basis with the largest available equivalent trees. The City shall have the authority to require that any dead trees, shrubs and plants be replaced within the next planting season.

5. City's Maintenance And Removal Authority:

a. Maintenance: The City shall have the right to plant, prune, maintain and remove trees, plants and shrubs within the landscape easement along all streets, alleys, avenues and lanes or within public grounds, parks and rights of way as may be necessary to ensure public safety or to preserve the symmetry and beauty of public property. The City shall also have the authority to prune, maintain and remove trees, plants and shrubs located upon private property which cause an obstruction to public travel along streets and sidewalks or impair vision of traffic signals or prevent the proper sight distance at intersections or in any other way create a public hazard.

b. Removal: The City shall have the right to cause removal of any dead or diseased trees, plants and shrubs on private property within the City, when such trees, plants and shrubs constitute a hazard to life and property or harbor insects or disease which constitute a potential threat to other trees, plants or shrubs within the City. The Parks and Recreation Director or any authorized representative will notify, in writing, the owners of such trees. Removal shall be done by said owners at their own expense within 30 days after date of service of notice. In the event of failure of owners to comply with such provisions, the City shall have the authority to remove such trees and charge the cost of removal on the owner's property tax notice.

6. Maintenance Guarantee: As a condition to issuance of the final certificate of occupancy, the applicant shall provide a maintenance guarantee to assure that all required landscape improvements shall be maintained. The guarantee shall comply with the following requirements:

a. Form: A maintenance guarantee form shall be obtained from the Planning Director and signed by the owner of the property.

b. Inspection: The owner of the property shall provide the City with signed, notarized, irrevocable license to run with the property to allow the employees, agents or contractors of the City to enter the subject property for the purpose of inspecting the landscaping and, if necessary, replacing unhealthy or dead landscape materials.

c. Notification Of Maintenance Noncompliance: If the Planning Director determines that the landscaping has not been maintained in compliance with this Section, the Planning Director shall notify the owner. The notice shall state:

(1) The work that must be done or the improvement that must be made to comply with the requirements of the maintenance guarantee; and

(2) The amount of time the owner has to commence and complete the required landscape work or improvements; and

(3) That, if the work or improvements are not commenced and completed within the time specified, the City will take enforcement action pursuant to this Chapter.

d. Exemption: Maintenance guarantees shall not be required for street trees and site trees in the RE, RP-E, R-1 and RP-1 Zoning Districts.

S. Substitution Of Plant Materials: The Planning Director shall have the authority to approve the installation of comparable substitute plant materials to satisfy the requirements of the approved landscape plan when the approved plants and landscape materials are not available at the time that installation is to occur or when other unforeseen conditions prevent the use of the exact materials shown on the approved landscape plan. Significant changes to plans that have been approved by the Planning Commission shall be subject to review and approval of the Planning Commission.

T. Temporary Suspension Of Landscape Standards: The installation of landscaping required by this Section may be temporarily suspended, in individual cases, by the Planning Director during periods of adverse weather conditions or when plants and landscape materials are not available. If the landscape standards of this Section are suspended, the Planning Director shall enter into an agreement with the landowner that will allow issuance of a temporary certificate of occupancy. (Ord. 4118, 12-16-1997)

(Ord. 4448, Amended, 11/27/2001, Prior Text; Ord. 4279, Amended, 12/14/1999, Prior Text; Ord. 4249, Amended, 05/25/1999, Prior Text)