

## **SUBCHAPTER 11. LANDSCAPING AND SCREENING STANDARDS.**

### **A. PURPOSE.**

This Section establishes requirements for landscaping elements, Buffering and screening to provide orderly, safe, attractive and healthy Development of land within the community. The regulations in this section are necessary to enhance the community's ecological, environmental and aesthetic quality. The City experiences frequent periods of drought; therefore, this section encourages the use of drought resistant plants that do not consume large quantities of water; such plants are listed in the Drop by Drop literature available on the City's website, and in the Unified Development Code Supplemental Schedule.

### **B. APPLICABILITY.**

Landscaping, Buffering, and screening are required in the following conditions:

- (1) All vacant sites that develop as any residential or non-residential use;
- (2) Existing non-residential or multi-family sites when additions, expansions, and/or redevelopments are equal to or greater than 25% of the existing impervious cover;
- (1) Existing non-residential or multi-family sites when cumulative additions, expansions, and/or redevelopments total 25% or more of the existing improvements over a 3-year period;
- (3) Existing non-residential or multi-family sites when a change of Use increases the amount of parking required by 25%;
- (4) Existing non-residential or multi-family sites with lawfully established nonconforming Uses when the Use is expanded.

### **C. GENERAL SITE LANDSCAPING REQUIREMENTS.**

- (1) Minimum Landscape Area or Landscape Setback. A minimum percentage of the total area of the property on which Development, construction, or reconstruction shall be devoted to Landscape Area or landscape setback.
  - (a) Table 1 below establishes the required minimum Landscape Area for all non-residential Developments.
  - (b) Table 2 below establishes the required minimum Landscape Area or setback requirements for all residential Developments.
- (2) Minimum Trees and Shrubs. A minimum number of Trees and Shrubs must be planted on property on which Development, construction, or reconstruction occurs.

- (a) Table 1 below establishes the required minimum number of Trees and Shrubs for all non-residential Developments. Additional plantings may be required beyond the minimum standards established in Table 1 in order to comply with the street yard, building and parking lot landscaping requirements.
- (b) Table 2 below established the required number of trees and shrubs for all residential Developments.
- (3) Location of Required Landscaping. The minimum Landscape Area and minimum number of trees and shrubs required by Table 1 and Table 2 shall be placed upon the portion of a tract or Lot that is being developed. New landscaping may be added to the undeveloped portions of the tract or Lot at the Owners' discretion, but any such landscaping shall not count towards meeting the minimum landscaping requirements, tree mitigation or incentivized in alternative landscape compliance.

**Table 1. Non-residential Landscape Area and Minimum Planting Requirements**

Non-Residential Zoning Districts		Percent of lot Landscaped	Number of required (3" Caliper) Trees and Shrubs (3-gallon) in landscape area
A	Agriculture/Conservation	15%	1 Tree & 4 Shrubs per 600 S.F.
O-1	Office-1 District	20%	1 Tree & 4 shrubs per 500 S.F.
O-2	Office-2 District	20%	1 Tree & 4 shrubs per 500 S.F.
NS	Neighborhood Services District	20%	1 Tree & 4 shrubs per 500 S.F.
R	Retail District	15%	1 Tree & 4 shrubs per 500 S.F.
GB-1	General Business-1 District	15%	1 Tree & 4 shrubs per 500 S.F.
GB-2	General Business-2 District	15%	1 Tree & 4 shrubs per 600 S.F.
LI	Light Industrial District	15%	1 Tree & 6 Shrubs per 800 S.F.
GI	General Industrial District	15%	1 Tree & 8 Shrubs per 1000 S.F.

**Table 2. Residential Landscape Area and Minimum Planting Requirements**

Site Landscaping Standards	Single-Family Suburban (SF-S) and Two Family (2F)	Multi-Family Suburban (MF-S)	Single-Family Urban Detached Structures (SF-U)	Single-Family Urban Attached Structures (SF-U)	Multi-Family Urban and Mixed Use Structures (MF-U)
Minimum	30% of total	40%	NA		

Landscape Area	lot area			
Landscape Setback Required	NA		Minimum 5' in addition to streetscape - covered in grass or groundcover	5' in addition to streetscape - covered in grass or groundcover or decorative hardscape  Must provide 1 of the following for each unit entry:  * 3" caliper ornamental tree (in addition to site tree requirements)  * 3' decorative wrought iron fence with access to street  * 3' decorative vinyl picket fence with access to street
Tree Requirements	Minimum 1 type C tree must be planted for every 20 linear feet of foundation along the portion of the building facing any street	1 - 3" caliper tree per 500 sq ft landscape area 4 shrubs per 500 sq ft landscape area	NA	
Foundation Plantings	Minimum 3 shrubs must be planted for every 10 linear feet of foundation exclusive of driveway along the portion of the building facing any street	Minimum 4 shrubs every 30' of foundation on all sides	Minimum 8 shrubs per unit	Minimum 4 shrubs every 30' of foundation on all sides
Planting Beds	Planting beds shall be covered with ground cover or mulch.			
Irrigation Standards	Irrigation of all required landscape area is required unless the site utilizes native landscaping or xeriscaping that can be established through temporary irrigation measures. The proposed plan must be approved by the City Arborist and conform to the City's Drop by Drop program.  Rainwater harvesting through the use of cisterns and rain barrels is highly encouraged. Collections should be architecturally integrated into the building and site design with			

	<p>collectors constructed of similar materials used throughout the development. Collectors are required to be sealed and connected to an irrigation system to dispense the collected water and prevent stagnation. Gutters or troughs leading to the collectors are to be designed holistically with the building design and not visually separate.</p> <p>Approved greywater systems are highly encouraged and may be utilized for irrigation.</p> <p>All irrigation shall be installed in accordance with <a href="#">Chapter 113</a>, Irrigators of the Code of Ordinances and the Tree Technical Manual.</p>
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**D. STREETSCAPE STANDARDS.**

- (1) Non-residential Streetscape Standards. Street yard trees shall be planted within the required 10' street yard landscape planting strip adjacent to the right-of-way, excluding driveways and access points of ingress and egress to the lot.
  - (a) The street yard tree and landscape area requirements may be used to meet the overall landscaping requirements established in Table 1 for non-residential sites.
  - (b) One medium or large tree must be planted for every 40 linear feet of street frontage when overhead utilities are absent.
  - (c) One small tree must be planted for every 20 feet of street frontage when overhead utilities are present.
  - (d) Street yard trees must be located not more than 20 feet from the ROW line, unless otherwise approved by the Planning Director.
  - (e) The street yard tree requirements above shall be used to determine number of required street yard trees and may be planted in a non-linear or clustered fashion.
- (2) Residential Streetscape Standards. All residential developments or mixed use developments shall require street trees according to Table 3.

**Table 3. Residential Streetscape Standards**

Streetscape Standards	Single-Family Suburban (SF-S) and Two Family (2F)	Multi-Family Suburban (MF-S)	Single-Family Urban Detached Structures (SF-U)	Single-Family Urban Attached Structures (SF-U)	Multi-Family Urban and Mixed Use Structures (MF-U)
Streetscape Width	Minimum streetscape dedication of 10' from back of curb shall be required.				
Sidewalk Required (Public)	4' wide	6' wide			

ROW)					
Planting Strip (between street and sidewalk)	Minimum 4'  May be covered in plant material or hardscape with tree wells.				
Street Trees	1 - 3" caliper tree per 30'				

**E. BUILDING LANDSCAPING.**

(1) Non-residential Building Landscaping.

- (a) Landscape areas may not be less than five feet (5') wide and must be constructed for at least 50 percent of the length of the building's primary facades. This requirement may be reduced or waived by the Planning Director, if site constraints exist.
- (b) One (1) shrub shall be planted every four (4) linear feet within the building planting strip.
- (c) Trees may be planted within the building planting strips. The building landscaping requirements may be used to meet the overall landscaping requirements established in Table 1.

(2) Residential Building Landscaping. Refer to Table 2.

**F. PARKING LOT LANDSCAPING.**

Parking lot landscaping may be used to meet the overall landscaping requirements established in Table 1 for non-residential and Table 2 for multi-family uses. Parking lot landscaping shall be calculated independently from residential landscaping requirements for multi-family parking lots. Landscaping must meet this Chapter's requirements pertaining to Sight Triangles, by maintaining visibility at intersections, Driveways and access easements.

(1) Parking Lot Design.

- (a) A parking space may not be located more than 50 feet from a landscaped area.
- (b) A parking row adjacent to a public right-of-way or major drive aisle shall have a maximum of ten (10) contiguous parking spaces separated by a Landscape Peninsula with a minimum of 360 square feet in size or the equivalent of 2 parking spaces.
- (c) In no case shall an Internal Parking Row exceed ten (10) parking spaces without a separation of a Landscape Island or Peninsula with a minimum of 180 square feet in size.
- (d) There shall be no more than six (6) adjacent parking rows without a Landscape Median of least ten (10) feet in width measured from back of curb to back curb.

Sidewalks may be included within Landscape Medians if the width of the Median expands to account for the sidewalk width.

- (e) Distinct parking areas shall be segmented and contain a maximum of 200 parking spaces. Parking segmentation may be achieved through the use of Landscape Medians.
  - (f) All parking rows must terminate with a landscape end island or peninsula at least 180 square feet in area regardless of parking row length. End islands or peninsulas may have sidewalks through them. Enhanced paving within Median sidewalks may be used to meet landscape area in accordance with subsection (H).
  - (g) All landscape islands, peninsulas, and medians shall be raised at least six (6) inches, curbed and must contain a surface, the majority of which is vegetated.
  - (h) All debris, wood chips, pavement, concrete, and rock over 2" in diameter shall be removed from the planting pit to a minimum of twenty-four (24") inch depth. The entire planting bed shall contain a minimum depth of twenty-four (24") inches of soil suitable for plant establishment and growth and may not be compacted or stabilized.
  - (i) Landscape Islands, Peninsulas, and Medians may be utilized as Bio-retention areas where appropriate and designed in accordance with the City of Austin standards.
  - (j) Any landscape area adjacent to pavement must be protected with a concrete curb and/or an equivalent barrier.
- (2) Minimum number of plantings within the landscape islands, peninsulas, and medians.
- (a) One (1) Tree shall be planted within each Landscape Island and Peninsula. If a Landscape Island extends the length of two (2) parking rows then two (2) trees shall be planted within the Landscape Island.
  - (b) One (1) Tree shall be planted at least every 30 feet within a Landscape Median.
  - (c) All new trees within a parking lot must be planted in a pervious area at least 180 square feet in size and have a minimum interior width of eight (8) feet.
  - (d) Graphic L1, Parking Lot Landscaping Requirements. The illustration below shall serve as an example for the Parking Lot Landscaping Requirements. If there is a discrepancy between the text of this Section and the image below, the text shall control.

**G. TREE DIVERSITY AND LOCATION.**

To maximize the benefits of an urban forest canopy, the following diversity and distance requirements shall be required. This subsection is applicable to all non-residential and multi-family uses.

- (1) Tree Diversity: There shall be no more than 20% of any tree species, and no more than 40% of any tree genus provided on site unless approved by the Planning Director; or
  - (a) If the total Landscape Area requires fewer than 30 trees, tree diversity shall be provided in accordance with Table 4 below.

**Table 4. Tree Diversity Requirements**

Number of Trees Required	Minimum Number of Species Required
1-10	1
11-20	2
21-30	3

- (b) No more than 50 percent of the total number of trees required on site may be type C Trees.

(2) Location.

- (a) Utility: No tree shall be planted closer than 5 feet to an underground utility or water line, and no Medium or Large Tree shall be closer than 15 linear feet from an overhead utility unless approved by the Planning Director.
- (b) Impervious Cover: No large or medium tree shall be closer than four (4) feet to impervious cover, and no small tree shall be closer than three (3) feet to impervious cover measured from the base of the tree.

(3) Table 5, Approved Tree List.

Common Name	Scientific Name	
	Family	Genus, Species
<b>Type A: Large Trees</b>		
(mature height 40 feet or more, recommended planting bed 400 square feet, recommended 40 feet apart)		
American Elm	Ulmaceae	Ulmus Americana

American Sycamore	Platanaceae	Platanus occidentalis
Bald Cypress	Taxodiaceae	Taxodium distichum
Bur Oak	Fagaceae	Quercus macrocarpa
Cedar Elm	Ulmaceae	Ulmus crassifolia
Chinquapin Oak	Fagaceae	Quercus muehlenbergii
Chittamwood (Gum Bumelia)	Sapotaceae	Sideroxylon lanuginosum
Deodar Cedar*8	Pinaceae	Cedrus deodara
Eastern Black Walnut	Juglandaceae	Juglans nigra
Ginkgo Biloba**	Ginkgoaceae	Ginkgo biloba
Honey-locust (Thornless)	Fabaceae	Gleditsia tricanthos var. inermis
Live Oak*	Fagaceae	Quercus virginiana (fusiformis)
Mexican Sycamore	Platanaceae	Platanus mexicana
Mexican white (Monterrey) Oak*	Fagaceae	Quercus polymorpha
Montezuma Cypress	Taxodiaceae	Taxodium mucronatum
Pecan	Juglandaceae	Carya illinoensis
Pond Cypress	Taxodiaceae	Taxodium ascendens
Shumard Red Oak	Fagaceae	Quercus shumardii
Southern Catalpa	Bignoniaceae	Catalpa bignonioides
Texas (Spanish) Red Oak	Fagaceae	Quercus buckleyi

**Type B: Medium Trees**

(mature height 25-40 feet, recommended planting bed 300 square feet, recommended 30 feet apart)

Anacua	Boraginaceae	Ehretia anacua
Arizona Cypress*8	Cupressaceae	Cupressus arizonica
Bigtooth Maple	Aceraceae	Acer grandidentatum
Carolina Cherry-laurel*	Rosaceae	Prunus carolinana
Chinese Pistache	Anacardiaceae	Pistacia chinensis
Eastern Red Cedar*8	Cupressaceae	Juniperus virginiana
Escarpment Black Cherry	Rosaceae	Prunus serotina ssp. Eximia
Golden Rain Tree	Sapindaceae	Koelreuteria paniculata

Huisache (Sweet acacia)	Fabaceae	Acacia farnesiana
Japanese Black Pine <sup>8</sup>	Pinaceae	Pinus thunbergii
Lacey Oak	Fagaceae	Quercus laceyi
Mesquite	Fabaceae	Prosopis glandulosa spp.
Texas (Little) Walnut	Juglandaceae	Juglans microcarpa
Texas Ash	Oleaceae	Fraxinus texensis
Western Soapberry	Sapindaceae	Sapindus drummondii

**Type C: Small Trees (OUC)**

(mature height 8-25 feet, recommended planting bed 150 square feet, recommended 15 feet apart)

American Smoke Tree	Anacardiaceae	Cotinus obovatus
Anacacho Orchid Tree	Fabaceae	Bauhinia congesta
Carolina Buckthorn	Rhamnaceae	Rhamnus caroliniana
Chilean Mesquite (Thornless)	Fabaceae	Prosopis chilensis
Chitalpa	Bignoniaceae	Chilopsis x Catalpa
Crape Myrtle	Lythraceae	Lagerstromia indica
Desert Willow	Bignoniaceae	Chilopsis linearis
Eve's Necklace	Leguminosae	Sophora affinis
Evergreen Sumac*	Anacardiaceae	Rhus virens
Flameleaf Sumac	Anacardiaceae	Rhus copallina
Goldenball Lead-tree	Fabaceae	Leaucana retusa
Loquat*	Rosaceae	Eriobotrya japonica
Mexican Bird of Paradise	Leguminosae	Caesalpinia mexicana
Mexican Buckeye	Sapindaceae	Ungnadia speciosa
Mexican Olive*	Boraginaceae	Cordia bossieri
Mexican Plum	Rosaceae	Prunus mexicana
Mexican Redbud	Fabaceae	Cercis Canadensis var. mexicana
Mountain Laurel*	Leguminosae	Sophora secundiflora
Possumhaw (Deciduous) Holly	Aquifoliaceae	Ilex decidua
Retama (Palo verde)	Fabaceae	Parkinsonia aculeata

Rough-Leaf Dogwood	Cornaceae	Cornus drummondii
Texas Madrone	Ericaceae	Arbutus xalapensis
Texas Persimmon	Ebenaceae	Diospyros texana.
Texas Pistacio*	Anacardiaceae	Pistacia mexicana
Texas Redbud	Leguminosae	Cercis Canadensis var. texensis
Vitex (Chaste tree)	Verbenaceae	Vitex agnus-castus
Wax Myrtle*	Myricaceae	Myrica cerifera
Yaupon Holly*	Aquifoliaceae	Ilex vomitoria
* - Evergreen		
**-Not to be planted within 20 feet of impervious surface		
8 - May be reduced to 2" caliper at planting		
(OUC) - Overhead Utility Compatible		

#### **H. LANDSCAPED AREA CREDIT.**

This subsection is applicable to non-residential and multi-family uses. The following may count towards meeting the non-residential landscape area requirements of this section:

- (1) Undisturbed vegetative areas not intended for future development (excluding drainage easements or water ways used to convey water) if all other landscaping requirements have been met.
- (2) Up to 25 percent of paved parking areas where constructed with brick pavers or pervious pavement systems, as approved by the Planning Director; or
- (3) Green roof systems at a one-to-one ratio for landscape area required.

#### **I. TREE CREDIT.**

- (1) This subsection is applicable to all developments and zoning districts.
- (2) The total Diameter calculation of preserved Protected Trees may count towards meeting the total tree caliper requirements in the Section at a one-to-one (1:1) ratio. Class 5 and 6 trees may be count towards meeting the total caliper requirements at a one and one-half-to-one (1.5:1) ratio. Tree ratio equivalents established in [Subchapter 12](#) shall not be utilized when determining tree credits.
- (3) Hackberry, Chinaberry, Chinese Tallow, Ligustrum, Mimosa, Cottonwood and Cedar (Ashe Juniper) Trees may not count towards meeting the requirements of this Section.

- (4) If the total number of required trees and/or caliper inches cannot feasibly be planted on-site, off-site tree mitigation may be used in accordance with [Subchapter 12](#), Tree Preservation Standards, if approved by the Planning Director.
- (5) All tree preservation measures shall be in accordance with the Tree Technical Manual.

**J. GENERAL PLANTING CRITERIA. (Applicable to all developments)**

(1) Trees.

- (a) Type A and B Trees must be a minimum of three-inch (3") caliper at planting.
- (b) Type C Trees must be a minimum of two-inch (2") caliper at planting.
- (c) Any proposed trees that are not selected from the Approved Tree List in Table 5 shall be approved by the Planning Director.

(2) Shrubs, Vines and Ground Cover.

- (a) Shrubs, and vines planted pursuant to this section shall be a minimum three (3) gallon container size.
- (b) Native tallgrasses may be provided in lieu of Shrubs and shall be a minimum three (3) gallon container size.

(3) Lawn Grass.

- (a) Grass areas shall be planted with drought resistant species normally grown as permanent lawns, such as Bermuda, Zoysia, or Buffalo.
  - (b) St. Augustine grass may be allowed where structures or trees provide shade for more than 75% of the day, if approved by the Planning Director.
  - (c) Grass areas may be sodded, plugged, sprigged, or seeded. However, solid sod must be used in swales or other areas subject to erosion.
  - (d) Right-of-way shall be restored and maintained with vegetative ground cover.
- (4) All new plant material shall meet the latest requirements of the American Standard for Nursery Stock (ANSI Z60.1).
  - (5) All new plant material shall be planted and maintained in accordance with the latest edition of the American National Standards Institute requirements for Tree, Shrub, and Other Woody Plant Maintenance (ANSI A300 Parts 1 through 6).

**K. SCREENING.**

- (1) Parking Lot Screening. This subsection is applicable to non-residential and multi-family uses and districts.

All parking must be screened from public rights-of-way and major drive aisles using the screening methods described in this subsection and must be maintained and at least 36 inches in height, through one of the following methods:

- (a) A berm;
- (b) A planting screen (hedge);
- (c) A wall; or
- (d) A combination of any of the above and trees.
- (e) Planted screening must be capable of providing a solid 36-inch screen within two (2) years, and must be planted in a prepared bed that is at least three feet (3') in width.
- (f) Screening must be offset at least three feet (3') every 60 linear feet.
- (g) Parking lot screening shrubs may be used to meet the overall landscaping requirements established in Table 1 and Table 2.

- (2) Screening of Mechanical Equipment.

- (a) This subsection is applicable to all developments.
- (b) All roof, ground and wall-mounted mechanical equipment (e.g., air handling equipment, compressors, duct work, transformers and elevator equipment) must be screened from view or isolated so as not to be visible from any residential districts or uses, streets, rights-of-way or public park areas within 150 feet of the property line of the subject lot or tract, measured from a point five (5') feet above grade in accordance with this section.
- (c) Roof-mounted mechanical equipment must be shielded from view on all sides using parapet walls.
- (d) Wall or ground-mounted equipment screening must be constructed of:
  - i. Vegetative screens; or
  - ii. Brick, stone, reinforced concrete, or other similar masonry materials; and
  - iii. All fence or wall posts shall be concrete-based masonry or concrete pillars.

- (e) Exposed conduit, ladders, utility boxes and drain spouts must be painted to match the color of the building. Natural metallic finishes are an acceptable alternative to paint.

(3) Screening of Outside/Outdoor Storage.

- (a) This subsection is applicable to all permitted outdoor storage in non-residential zoning districts.
- (b) Outside storage shall only be located on the side or rear of the primary building and must be screened from public view.
- (c) Outside storage shall be screened with a minimum eight-foot (8') tall screen constructed of one of the following:
  - i. A masonry wall or other material that is similar to the principle structure;
  - ii. A three-foot (3') landscaped berm;
  - iii. A planting enclosure of large evergreen Shrubs planted a maximum of four (4') feet apart that shall create a solid screen to a minimum height of eight (8') feet within two (2) years; or
  - iv. A combination of the above.
  - v. A Vegetative Screening Structure a minimum of eight (8') feet in height may be used in lieu of the outside storage screening requirements above.

(4) Screening of Waste Containers.

- (a) This subsection is applicable to all non-residential and multi-family uses and districts.
- (b) Waste containers must be located on the side or rear of the building and screened from public view to minimize visibility.
- (c) Waste containers must be located at least 50 feet away from any residential use or District's property lines with the exception of multi-family.
- (d) Waste containers must be located on a reinforced slab that is at least six inches thick and is sloped to drain.
- (e) Waste containers must be screened on all four (4) sides, using an enclosure that screens the waste container from view at the property line. Screening must be at least as tall as the waste container(s) and comprised of materials and color schemes that are visually and aesthetically compatible with the overall project that incorporate the following:

- i. Brick;
  - ii. Stone;
  - iii. Stucco;
  - iv. reinforced concrete; or
  - v. Other similar masonry materials.
- (f) Waste containers with fence posts must be rust-protected metal, concrete-based masonry or concrete pillars; and
- (g) Waste containers must have six-inch concrete filled steel pipes (bollards) that are located to protect the enclosure from truck operations and not obstruct operations associated with the waste container.
- (h) Waste container enclosures must have steel gates with spring-loaded hinges or the equivalent and fasteners to keep them closed. When in use, tie-backs must be used to secure the steel gates in the open position.
- (i) Waste container screening must be maintained by the Owner at all times.
- (j) The ingress, egress, and approach to all waste container pads must conform to fire lane requirements.

(5) Screening of Loading Docks.

- (a) This subsection applies to all sites with loading docks in nonindustrial Districts and all buildings equal to or exceeding 30,000 square feet in area within industrial districts.
- (b) Loading and service areas must be located at the side or rear of buildings.
- (c) Off-street loading areas must be screened from view from any street or adjacent property of differing land use.
- (d) Loading areas must be enclosed on three sides by a wall or other screening device not less than eight (8') feet tall with one row of perimeter evergreen trees spaced every 10 feet adjacent to the loading area.
- (e) Loading areas must not be located closer than 50 feet to any single-family Lot, unless wholly within an enclosed building.
- (f) Screening materials shall be comprised of:

- i. An 8-foot wall that has a similar finish to the primary structure; and
- ii. A combination of evergreen Trees and Shrubs that will result in solid vegetative screening at least 8 feet in height within two (2) years;
- iii. A segmented Vegetative Screening Structure a minimum of eight (8') feet in height may be used in lieu of the shrub plantings for the screening of loading docks above.

(6) Screening of Detention and/or Water Quality Ponds

- (a) This subsection is applicable to all non-residential and multi-family uses and districts.
- (b) All proposed private detention and water quality facilities shall be screened by means of the following landscape elements:
  - i. One large or medium tree shall be planted for every thirty (30) linear feet around the perimeter of the detention and/or water quality pond; and
  - ii. One small size tree shall be planted every thirty (30) linear feet around the perimeter of the detention and/or water quality pond; and
  - iii. One large shrub (minimum five (5) gallon size) shall be planted for every four (4) linear feet around the perimeter of the detention pond; and
  - iv. Landscape berm (minimum 3 feet in height); or
  - v. Masonry wall (minimum 3 feet in height).
- (c) A Vegetative Screening Structure a minimum of three (3') feet in height may be used in lieu of the landscape berm or masonry wall requirement for the screening of detention ponds.
- (d) Exceptions to the screening requirement may be waived or reduced by the Planning Director if the facility is designed as a site amenity feature such as a retention pond or similar feature.

(7) Screening of Walk-in coolers

- (a) This subsection is applicable to all developments and zoning districts.
- (b) The screening of walk-in coolers shall be structurally integrated into the primary structure and composed of similar masonry materials to that of the primary structure.
- (c) A wood board privacy fence shall not be considered adequate screening.

- (8) Alternative Screening Plans. Alternative Screening Plans that reflect innovative approaches to screening may be approved by the Planning Director.

## **L. BUFFERING REQUIREMENTS.**

- (1) Bufferyard Purpose. Buffering, inclusive of buffer setbacks, vegetative screening, fences, walls and reserved greenspace is intended to help minimize any negative impacts of a commercial or multi-family Use on an adjacent residential property, whether contiguous or across a right-of-way. A buffer should visibly separate one use from another and reduce, shield or block noise, glare, or other similar nuisances. The landscaping required within bufferyards shall be provided in addition to the site landscaping required in Table 1 and Table 2.
- (2) Bufferyard Plantings and Screening Required. A bufferyard is required when a more intense land use or district (e.g. commercial or industrial) is adjacent to a suburban residential use or district with the exception of a multi-family use or district adjacent to another multi-family use or district. The bufferyard shall include:
- (a) 4 (Minimum of 75% Large and/ or Medium evergreen) Trees and 15 Shrubs per 100 linear feet of the site development boundary; and
  - (b) 6-foot opaque masonry wall
- (3) Bufferyard Area Required.
- (a) All open space within a bufferyard shall be planted with required plantings, grass or other vegetative ground cover and extend a minimum of 15 feet from the property line or the bufferyard area requirement established by the specific zoning district stated in [Subchapter 4](#), whichever requirement is greater.
- (4) Permitted Uses.
- (a) A bufferyard may be used for passive recreation or stormwater management, and it may contain pedestrian or bike trails provided that:
    - i. No Plant Material is eliminated;
    - ii. The total width of the bufferyard is maintained; and,
    - iii. All other regulations of this Section are met.
- (5) Bufferyard Walls.
- (a) Walls may be accented by masonry, stone, EIFS, or concrete columns. Walls may be masonry, stone, concrete, woodcrete, or a combination of these materials, and shall be finished on both sides.

- (b) Walls shall be a minimum of six feet in height and a maximum of eight feet (8'). When the adjacent property and the bufferyard are at different elevations, the Planning Director may require a fence or wall height, berms or other device greater than eight feet to ensure adequate buffering.
- (c) Walls shall be placed within one foot of the common property line when physically possible. In the event that there is a physical constraint that will not allow the construction of a fence on the common boundary line (including, but not limited to, the existence of a creek, access easement, or existing vegetation, the Planning Director may authorize an alternative location.
- (d) Walls may not be allowed to encroach into a Sight Triangle for a public or private right-of-way.
- (e) When the Adjacent Use is across the street, no fence shall be required.
- (f) The requirement for walls may be omitted if the required plantings are tripled and there is an existing treeline proposed for preservation abutting an existing fence.
- (g) Permits. Walls over six feet in height must obtain a building permit. Walls and masonry columns shall meet the footing standards prescribed by the building code for such structures.

**M. FENCE AND WALL STANDARDS.**

1. General Requirements. The following standards shall apply to all zoning districts and uses.

- (a) Except as required in this chapter in (K) Screening or (L) Buffering Requirements, fences and walls may not be more than six feet in height. Fencing and walls shall not be placed within the line of sight as determined by the Sight Triangle.
- (b) Fences and walls must be constructed of high quality materials, such as decorative blocks, brick, stone, woodcrete and wrought iron. The following table specifies which types are permitted and prohibited based n the use of the structure:

Use	Wood	Chain Link	Wrought Iron	Masonry Product
Single Family Detached	Permitted	Prohibited	Permitted	Permitted
Single Family Attached	Permitted	Prohibited	Permitted	Permitted
Multi-Family Uses	Prohibited	Prohibited	Permitted	Permitted
Commercial, Office, and Retail Uses	Prohibited	Prohibited	Permitted	Permitted
Industrial Uses	Prohibited	Permitted	Permitted	Permitted

		when not visible from the public right-of-way		
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- (c) Breaks in the fence or wall shall be made to provide for required pedestrian connections to the perimeter of the site and to adjacent Developments.
- (d) Except as required in this chapter in (L) Buffering Requirements, the maximum length of a continuous, unbroken and uninterrupted fence or wall plane is 100 feet. Breaks must be provided through the use of columns, Landscaped Areas, transparent sections or a change in material.

2. Additional Requirements for Suburban Residential Uses and Zoning Districts.

- (a) Front yard fences are permitted in the SF-S and 2-F districts between the front line of the principal building and a public street provided that they are four (4') feet tall or less.
- (b) Lots that back onto an arterial street must provide a minimum ten foot landscaped parkway measured from the back of the side of the sidewalk furthest from the street pavement, to the fence. The landscaped parkway must be maintained in a common area to be maintained by the homeowners association.
- (c) Lots that back onto a local or collector street must have a minimum five foot landscaped parkway, as described in (F) above. This common area must be maintained by the homeowners association.
- (d) Subdividers must provide staggers or other visual breaks to relieve the linear character of perimeter fence walls adjoining arterial streets. This common area must be maintained by the homeowners association.
- (e) Subdividers must place Masonry Columns a minimum of 120' apart and at all areas where two different sections of fence meet (typically at a 90 degree angle or similar) along arterial and collector streets or public view areas. This common area must be maintained by the homeowners association.
- (f) Subdividers must provide decorative fences or capped fences along arterial and collector streets and public view areas. This common area must be maintained by the homeowners association.
- (g) Masonry entry signs are required at the main entrance to each subdivision. This common area must be maintained by the homeowners association.

- (h) Subdividers must provide a minimum twenty foot wide landscaped area along arterial streets, measured from the right-of-way line to the fence of the subdivision. This common area must be maintained by the homeowners association.

## **N. LANDSCAPING INSTALLATION AND MAINTENANCE.**

- (1) Unless noted otherwise, this subsection is applicable to all development and zoning districts. All landscaping must be installed and maintained in accordance with this subsection and the requirements below:
  - (a) Permits. Permits for building, paving, utilities or construction may not be issued until a Landscape Plan is submitted and approved by the City. The Landscape Plan must be submitted with the Site Plan required in [Subchapter 3](#). A Certificate of Occupancy will not be issued until the Landscape Plan approved by the City has been installed and a concurrence letter has been provided by the landscape architect. If a Certificate of Occupancy is sought during a season of the year in which the City determines that it would be impractical to plant trees, shrubs or grass, or to lay turf, the developer/Owner shall provide financial assurance of payment of the cost of installing the Landscape Plan acceptable to the City, which will remain in effect until the Landscape Plan is installed and accepted by the City. The Landscape Plan must be installed within five (5) months of final acceptance of the development by the City or issuance of the first Certificate of Occupancy within the development.
  - (b) Enforcement. If at any time after the issuance of a Certificate of Occupancy, the landscaping that was installed does not conform to the Landscape Plan or the Landscape Standards, the City will issue notice to the property owner, tenant or agent, citing the violation and describing the action required to comply with this section. The owner, tenant or agent will have thirty (30) days from date of said notice to comply with approved Landscape Plan. If the landscaping is not installed within the allotted time, the property owner, tenant, or agent is in violation of this Chapter. In addition to any other remedy available to the City, the Certificate of Occupancy on that property may be revoked.
  - (c) Maintenance. The current Owner and subsequent Owners of the landscaped property, or the manager or agent of the Owner, will be responsible for the maintenance of (i) all landscape areas and materials; (ii) required bufferyard areas and materials; and, (iii) required screening materials. These three areas must be maintained so as to present a healthy, neat and orderly appearance at all times, free of refuse and debris. Maintenance will include the replacement of all dead Plant Material if such material was used to meet the requirements of this Chapter. All such plants must be replaced within six months of notification, or by the next planting season, whichever comes first.
  - (d) Replacement of Trees. If a Tree, for which credit has been obtained pursuant to this section, dies or is removed within five (5) years of the issuance of a Certificate of Occupancy, landscape development sufficient to equal the area credited will be

required. The replacement trees or shrubs shall be of the same size and species as shown on the approved site plan or must be of equivalent quality and size. Single-Family residential development is exempt from this requirement.

- (e) Irrigation Standards. One of the following irrigation methods must be used to ensure survival of the required Plant Material in Landscaped Areas:
  - i. Conventional System: An automatic underground irrigation system that may be a conventional spray and/or bubble type head.
  - ii. Temporary and Above-Ground Watering: Landscape areas utilizing Xeriscape plants and installation techniques, including areas planted with native grasses, wildflowers, and trees may use a temporary aboveground system. Irrigation for such areas must be provided for the first two growing seasons.
  - iii. Rain barrels and cisterns may be used as supplemental irrigation.
  - iv. Gray water recycling systems in accordance with Texas Commission on Environmental Quality (TCEQ) standards and the International Plumbing Code adopted by the City of Pflugerville.
  - v. No irrigation is required for undisturbed natural areas or for undisturbed existing trees.

## **O. PLAN REQUIREMENTS.**

An application for site plan approval must contain a Landscape Plan, a Tree Survey, a Tree Protection Plan if applicable, Tree Replacement Plan if applicable, and an Irrigation Plan. This subsection is applicable to all non-residential and multi-family residential developments.

- (1) Landscape Plan Requirements. The landscape plan shall be prepared by a registered landscape architect and contain the following items. (Elements of a Tree Protection Plan, Tree Replacement Plan, and Irrigation plan may be included within the Landscape Plan; however the Planning Director reserves the right to require a separate plan.)
  - (a) North arrow
  - (b) Minimum scale of one inch equals 50 feet; show scale in both written and graphic form.
  - (c) Date of the landscape plan
  - (d) Legend
  - (e) Location, size and species of all trees to be preserved.

- (f) Location of all plant and landscaping material to be used, including plants, paving, benches, screens, fountains, statues, earth berms, ponds, topography of site, or other landscape features.
  - (g) Scientific and common names of all plant materials to be used.
  - (h) Size of all shrubs proposed (container size, planted height, etc.)
  - (i) Size of all trees proposed (caliper size, planted height, spread, etc.)
  - (j) Spacing of plant material where appropriate.
  - (k) Bufferyard area and required Plant Material, if applicable.
  - (l) Vegetative Screening of parking lots, mechanical equipment, outside storage, loading docks and detention facilities, if applicable.
  - (m) Location, size, directional lean and species of all trees to be preserved with indication of protective fencing and preservation measures in accordance with the Tree Technical Manual.
  - (n) Location of overhead and underground utilities within or near landscape areas.
  - (o) Applicable irrigation notes.
  - (p) Description of installation and maintenance provisions.
  - (q) Name and address of the person(s) responsible for the preparation of the landscape plan.
  - (r) Signature and seal of the person(s) responsible for the preparation of the landscape plan.
  - (s) General Landscaping Notes: (Alternative Landscape Compliance, Tree Mitigation, applicable notes from the Tree Technical Manual, etc)
  - (t) Other pertinent information requested by the Planning Director.
- (2) Tree Survey. The tree survey shall be provided in accordance with the Tree Technical Manual.

**P. ALTERNATIVE LANDSCAPE PLANS.**

- (1) This subsection is applicable to all non-residential and multi-family residential developments.

- (2) An alternative landscape plan may be submitted for approval to the Planning Director if the aesthetic, Buffering and environmental intent of the requirements in this section are met, and the plan does not diminish any natural feature that would be required if this section were strictly enforced. Such alternative plans must be certified by a landscape architect registered by the State of Texas. The Planning Director may give special consideration to the following items included in Alternative Landscape Plans in accordance with Table 6, Alternative Compliance Equivalent Ratings:
- (a) Preservation of large existing native trees, if applicable.
  - (b) Use of Low Impact Development (LID) measures including functional cisterns for alternative irrigation, rain gardens and green roofs.
  - (c) Diversity of Tree species above the minimum requirements.
  - (d) Use of pervious pavement systems within parking areas.
  - (e) Use of structural soil near parking lot landscape islands, peninsulas, and medians.
  - (f) Use of bio-retention swales within parking lot landscape islands and medians.
  - (g) Protection of Riparian Areas

**Table 6, Alternative Compliance Equivalent Ratings**

<b>Alternative Compliance Equivalent Ratings</b>	
<b>Deficiencies</b>	
*The following should be used to formulate Alternative Landscape Plans when a site design cannot conform to the basic landscaping requirements as described in this Section. The Alternative Landscape Plan proposals shall equal a zero rating or higher.	
<b>% of Lot Landscape Area deficiency of req.</b>	<b>Negative Points</b>
.1 % - 3%	-4
3.1% - 5%	-6
5.1% - 7%	-8
7.1% - 10%	-10
10.1% - 20%	-15
20.1% or more	Board of Adjustment
<b>Required # of Trees</b>	<b>Fee in-lieu</b>
Up to a 20% Reduction in # of Trees	\$150 per caliper inch required

<b>Reduction in Caliper size</b>	<b>Negative Points</b>
“Type A” Large Trees	Not Permitted
“Type B” Medium Trees {down to 2" caliper}	-3
“Type C” Small Trees {down to 1-1/2" caliper for all Trees}	-2
<b>Required # of Shrubs</b>	<b>Negative Points</b>
.1% - 5% Reduction	-4
5.1% - 10% Reduction	-6
10% - 20% Reduction	-8
More than 20% Reduction	Not Permitted
<b>Deviation from Table 5, Approved Tree List</b>	<b>Negative Points</b>
.1% - 10% of Trees	-2
10.1 % - 20% of Trees	-4
More than 20% of Trees	Not Permitted
<b>Tree Species Diversity</b>	<b>Negative Points</b>
Below the requirement	-5
<b>Excessive Parking + additional Landscape area</b>	<b>Negative Points</b>
Exceed parking req. by .1% - 4.99%	-1
Exceed parking req. by 5%	-2
Exceed parking req. by 10%	-4
Exceed parking req. by 10.1 +	Not Permitted
Exceed parking req. by up to 20% (Corridor Zoning)	-5
Exceed parking req. by 20.1% + (Corridor Zoning)	Waiver to the Planning and Zoning Commission
<b>No Protected Tree Preservation</b>	<b>Negative Points</b>
Protected Tree Preservation - Groups 2, 3 or 4	-5
And Protected Tree Preservation - Groups 5 or 6	-10

<b>Building Landscaping</b>	<b>Negative Points</b>
Reduced by 1/2 of the requirement	-3
Waived due to Site Constraints or Building Form/Use	-5
<b>Reduction in S.F. of Parking Lot Landscape Area</b>	<b>Negative Points</b>
Peninsulas or Islands < 180 S.F. & = 150 S.F.	-3
Peninsulas or Islands < 150 S.F.	Not Permitted
Median reduction up to 8 feet in width	-3
<b>Landscape Islands or Peninsula Separation</b>	<b>Negative Points</b>
More than 10 parking spaces separation	-5
More than 14 parking spaces separation	-8
More than 19 parking spaces separation	Not Permitted
<b>Trees installed in Parking Lot Islands or Peninsulas</b>	<b>Negative Points</b>
Within 50 feet of each space (Required)	0
Within 75 feet of each space	-5
Within 100 feet of each space	-10
<b>Median Placement</b>	<b>Negative Points</b>
Every 6 Parking Rows divided by a Median (Required)	0
Every 7 Parking Rows divided by a Median	-5
Every 8 Parking Rows divided by a Median	-10
No more than 200 parking spaces divided by a Median	Not Permitted
<b>Trees installed in Parking Lot Medians</b>	<b>Negative Points</b>
Planted every 30 linear feet (Required)	0
Planted every 40 linear feet {All Type A Trees}	0
Planted every 50 linear feet	-5
Planted every 60 linear feet	-10

Planted every 70 linear feet or more	Not Permitted
Alternative Screening (Not Quantitative)	Screening Sufficiency Determined by Planning Director
Alternative Buffering (Not Quantitative)	Buffer Sufficiency Determined by Planning Director
Bufferyard Reduction (Non-Corridor District)	Board of Adjustment
Up to 20% Bufferyard Reduction (Corridor District)	Administrative or Waiver to the P&Z Commission
More than 20% Bufferyard Reduction (Corridor District)	Waiver to the P&Z Commission
<b>Alternative Compliance Equivalent Ratings</b>	
<b>Deficiency Compensation</b>	
*The following should be used to formulate Alternative Landscape Plans when a site design cannot conform to the basic landscaping requirements as described in this Section. The Alternative Landscape Plan proposals shall equal a zero rating or higher.	
<b>Required # of Trees (Additional)</b>	<b>Positive Points</b>
3.1% - 5%	+2
5.1% - 7%	+3
7.1% - 10%	+4
10.1% - 20%	+5
20.1% or more	+6
<b>Required # of Shrubs (Additional)</b>	<b>Positive Points</b>
5.1% - 10%	+1
10% - 20%	+1.5
More than 20%	+2
<b>Tree Species Diversity (%) Above Requirement</b>	<b>Positive Points</b>
20% - 39.99%	+3
40% +	+5
<b>Green Roof</b>	<b>Positive Points</b>
For at least 75% of roof	+10

<b>Tree Preservation</b>	<b>Positive Points</b>
Protected Tree Preservation - Groups 2, 3 or 4	+5
Or Protected Tree Preservation - Groups 5 or 6	+10
<b>Trees &amp; Shrubs Credit</b>	<b>Positive Points</b>
Xeriscaping Plants	+2
All Trees chosen from Table 5. Approved Tree List	+2
<b>Use of supplemental Irrigation</b>	<b>Positive Points (Use of system) Max 15 pts.</b>
Functional Cistern	+15
Rain Barrel	+5
Grey Water System	+15
<b>Use of pervious pavement systems</b>	<b>Positive Points</b>
Within at least 50% of parking areas	+10
Within the total root zone of Preserved Trees (CRZ protected from any impervious cover unless approved by the Planning Director)	+5
<b>Use of Bio-retention swales or rain gardens {Efficiency determined by Planning Director}</b>	<b>Positive Points</b>
Within at least 50% of all Parking Lot Landscape Areas	+5
Within at least 90% of all Parking Lot Landscape Areas	+10
<b>Use of Structural Soil {Efficiency determined by Planning Director}</b>	<b>Positive Points</b>
within 10 feet of all trees on site	+5
within 15 feet of all trees on site	+10
within 20 feet of all trees on site	+15
<b>100 Year Floodplain Buffer (Undeveloped Floodplain)</b>	<b>Positive Points</b>

25 foot vegetative Bufferyard to the Floodplain	+5
30 - 50 foot vegetative Bufferyard to the Floodplain	+10
60 + foot vegetative Bufferyard to the Floodplain	+15
<b>Detention/Retention Ponds (if applicable)</b>	<b>Positive Points</b>
Fountain feature within a retention pond	+5
Other Innovative Landscape Features (not listed)	Determined by the Planning Director