

SECTION 11: LANDSCAPE REGULATIONS

Section 11.01 Purpose and Objectives

It is the intent of this Section of the Zoning Ordinance to establish minimum standards for the provision, installation, protection and maintenance of landscape materials in new non-residential developments in order to promote the orderly, safe and environmentally sound development of land located within the corporate limits thereby promoting the health, safety and general welfare of the community. It is also aimed at achieving goals and objectives in the Comprehensive Plan.

The regulations contained herein are necessary to enhance the community's aesthetic, environmental and economic structures. The importance of preserving and improving the natural environment and maintaining a working ecological balance is of increasing concern. The use of landscape elements can effectively contribute to the processes of air purification, oxygen regeneration, water absorption and noise, glare and heat abatement, as well as the preservation of the community's aesthetic qualities.

It is also recognized that it is possible to realize numerous beneficial effects of landscaping including the following:

1. Landscaping can minimize demands on the City storm sewer system by preserving natural drainage.
2. The improvement of air and water quality is achieved through such natural processes as photosynthesis and mineral uptake.
3. The use of trees and other plants reduces erosion by the binding of soil particles with their roots, thus holding the soil together against the effects of wind and water.
4. Vegetation reduces and/or reverses air, noise, heat and chemical pollution through the biological filtering capacities of trees and other vegetation.
5. Landscaping reduces hot air temperatures caused by paved surfaces and automobiles through the process of transpiration associated with green material. Vegetation also helps promote energy conservation through the creation of shade, reducing heat gain in, or on, buildings and paved areas.
6. Landscaping provides visual buffering and beautifies the appearance of setback and parking areas within the City.
7. The use of landscaping also enhances the safety of parking lots by guiding the circulation of cars and people and by insuring that the driver's vision is unobstructed.
8. Preservation of landscaping protects, preserves and increases the value of property.
9. The use of landscaping helps create natural habitat that supports eco-tourism.

Section 11.02 Applicability

This section shall apply to all new development or redevelopment of non-residential land uses in non-residential zones. Non-residential zones shall include Multifamily Triplex/Quadplex (M-1), Multifamily (M-2), Planned Development (PD) if the site plan indicates non-residential uses, Neighborhood Services (N), Office (O), General Retail (GR), Light Industrial (LI), Heavy Industrial (HI), and any other zones created in the future that are non-residential.

All developed property in such districts which do not comply with the provisions of this Section on the effective date of the adoption of this Section shall be considered non-conforming and shall be allowed to continue to operate until such time as a building permit is sought to reconstruct or enlarge a structure on such property to an extent exceeding fifty percent (50%) of the current replacement cost of such structure. At that time, the provisions of this Section shall apply, and said areas shall be brought into compliance. Such structures may be exempt when remodeling, if the exterior walls of the building remain the same.

Any non-residential property on which one or more protected trees, (as defined below) are located, shall be subject to a tree removal permit prior to removal of such tree whether or not a building permit is being sought.

Section 11.03 Definitions

1. **BERM** – an earthen mound designed to provide visual interest, screen undesirable views, and/or decrease noise.
2. **BUILDING SITE** – the total area that is owned by the developer and proposed to be improved including easements, but not right-of-way.
3. **CALIPER** – the diameter of a tree at six inches (6”) above natural grade.
4. **DRIPLINE** – the vertical line extending from the outermost portion of the tree canopy to the ground.
5. **GROUND COVER** – low growing plants in such a manner as to form a continuous cover over the ground, normally reaching an average maximum height of not more than twenty-four inches (24”) at maturity. *Grass is not classified as a ground cover for purposes of this ordinance.*
6. **HISTORIC TREE** – any protected tree having a trunk circumference of sixty inches (60”) or more measured at four and one half feet (4’6”) above natural grade.
7. **NON-RESIDENTIAL** – shall mean triplex/quadplex (M-1), multi-family (M-2), Planned Development (PD) where site plan indicates non-residential uses, neighborhood services (NS), office (O), general retail (GR), light (LI) or heavy industrial (HI), and any other non-residential zoning district as may be created hereafter.

8. PARKING, INTERIOR – parking rows which are *not* located on the periphery of the proposed project site and do not abut any property line associated with the site.
9. PARKING ROWS – single or double rows. Double rows are face to face parallel rows of spaces for the parking of motor vehicles (see illustration in Section 11.07).
10. PROTECTED TREE – any tree, regardless of species, having a trunk circumference of twenty-four inches (24”), or caliper of greater than eight inches (8”), measured at four feet (4’) above natural grade.
11. RESIDENTIAL – shall mean single-family residential (R-1), duplex residential (R-2), manufactured housing/mobile home residential (MH) and Planned Development (if site plan shows only residential uses).
12. TREE - any self-supporting woody plant of a species which normally grows to an overall height of a minimum of 15 feet in the lower Rio Grande Valley.
13. TREE REMOVAL – any intentional or unintentional act which may reasonably be expected to cause a protected tree to decline and die, including, but not limited to:
 - Severing the trunk
 - Excessive pruning or mechanical damage to the trunk or branching system, bark or cambium layer
 - Damage to the root system by machinery or soil compaction
 - Substantial change of natural surface grade or drainage pattern within the dripline
 - Excessive paving with impervious materials within the dripline
 - Direct or indirect application of toxic chemical, fire, or other damaging substance to tree or root system
14. WHEEL OR CURB STOPS – permanently secured, durable devices designed to restrict vehicular encroachment.
15. XERISCAPE – landscaping by use of plants structurally adapted for life and growth with a limited water supply. Commonly referred to as “drought resistant”.

Section 11.04 General Requirements

All landscaping shall be done with healthy plants and installed according to accepted good planting procedures. Landscaped areas shall be planned with consideration for the protection of plants from vehicular encroachment.

1. Landscape Plan

Landscaped areas shall be planned as an integral part of a development project. A landscape plan shall be submitted with building permit application. Said plan will need to indicate the following elements:

- Lot boundary lines and accurate dimensions
- Total area of the lot and computation of required landscaped areas including number of required trees
- Clearly delineate any existing trees to remain indicating caliper for full credit, any protected trees and all proposed landscape development
- Clearly delineate proposed water sources and distance from landscaped areas
- Detailed drawing of the existing and/or proposed off-street parking and other paved areas
- The location and dimensions of any existing and/or proposed buildings

2. Landscape Area Requirements

Landscaping shall be generally provided as follows:

A. Commercial Areas:

- (a) Eight percent (8%) of gross building site area.
- (b) At least seventy percent of the landscaping requirement shall be located in the front or side yards of the site. (Exception: In the Downtown Improvement District and La Placita District, developers are encouraged to place buildings at the front property line to enhance pedestrian flow. Therefore, in these districts all plant materials will be allowed in the side or rear yard.)

B. Multifamily Areas: 15% of gross building site

C. Planned Developments: The landscaping required by this ordinance may be modified during the site plan review process for areas zoned Planned Development District according to specific design constraints of the site, provided however, that the general spirit and intent of these regulations be observed.

D. Right-of-Way: remaining **road** right-of-ways may be landscaped for a credit not to exceed 25% of the right-of-way area landscaped. Said credit will be applied toward the total required site landscaping.

3. Plant Materials

A. Plant materials used in conformance with provisions of this Ordinance may include, but are not limited to the following: grass, shrubs, vines, hedges and trees. However, at no time can grass be used solely to meet the landscape requirements. Please see list of suggested plant materials in Section 11.09 and/or brochure available regarding selecting and planting native plants.

B. Trees Required:

- (a) When the landscape area requirement is 1 to 2,000 square feet, a minimum of one tree for every 400 square feet of landscaped development shall be required.

- (b) When the landscape area requirement is 2,001 to 10,000 square feet, a minimum of one tree for every 600 square feet of landscape development shall be required, but not less than five.
 - (c) When the landscape area requirement is 10,001 or greater square feet, a minimum of one tree for every 800 square feet of landscape development shall be required, but not less than seventeen.
 - (d) All partial tree calculations shall be rounded up to the next highest whole tree.
 - (e) Trees that are newly planted in excess of the above schedule shall receive credit against the remaining landscape area requirements according to the following schedule, but in no case shall the credit for trees exceed fifty percent of the landscape area requirements.
- C. New or existing trees above the number required shall receive credit as follows:
- (a) Each tree greater than twelve inches (12") in caliper shall receive a credit of three hundred square feet (300) that may be deducted from the total landscaping requirement
 - (b) Each tree greater than six inches (6"), but less than twelve inches (12") in caliper shall receive a credit of two hundred square feet (200) that may be deducted from the total landscaping requirement
 - (c) Each tree greater than three inches (3"), but less than six inches (6") in caliper shall receive a credit of one hundred square feet (100) that may be deducted from the total landscaping requirement
 - (d) To receive credit for a tree smaller than three inches (3") in caliper, it must be a minimum of six feet (6') in height when measured immediately after planting and will be given a credit of seventy-five square feet (75). It must be a true tree species (not a Bouganvillea or other similar shrub/vine).
 - (e) In the case of existing palm trees, the required measurement shall be six feet (6') from the ground level to the base of the palm fronds. New palms trees planted to meet tree requirements will require two palms tree for each tree required.
 - (f) In order to encourage preservation of trees that are already established, an additional credit of 50 square feet shall be given for the preservation of existing trees that are at least six feet (6') in height measured from the ground level. This would be in addition to the credit received for the tree itself.
 - (g) The non-paved planting area around the base of each tree should be no less than 4' x 4'.
- D. Existing trees to remain on-site shall be protected from compaction and root damage during construction.
- E. Shrubs should be a minimum of one-gallon plantings.
- F. Ground covers should be planted in a manner as to present a finished appearance and reasonably complete within one year after planting.
- G. Landscaping shall not obstruct the view from any driveway approach, nor shall any landscaping which creates an obstruction of view be located in the radius of any curb return as indicated on the approved construction plan.

- H. Plant materials located within the site triangle, as illustrated in Appendix A, may only be grass maintained at a height not to exceed twelve inches (12”), or ground cover material maintained at a height not to exceed twenty four inches (24”).
- I. Synthetic lawns or plants or other artificial landscape material will not be allowed to substitute for plant requirements of this section.

4. Watering Requirements

- A. All landscaped areas must be:
 - (a) watered by an underground sprinkler or drip system installed by a Texas registered irrigation specialist, or
 - (b) must be located within one hundred feet (100’) of a water source (i.e. hose bib) if to be manually watered.
 - (c) watering facilities are not required for maintenance of undisturbed existing vegetation and trees.
- B. Watering system guidelines:
 - (a) Watering hoses must not cross vehicular or pedestrian travel areas during business hours.
 - (b) All watering devices shall have adequate backflow prevention devices.
 - (c) Irrigation systems should be designed to account for high-water-demand areas separate from other reduced-water-demand areas.
 - (d) Care should be taken in the irrigation system design so that, to the greatest extent practical, water being applied to impervious areas is eliminated. Low-trajectory-spray nozzles are encouraged in order to reduce the effect of wind velocity on the spray system. Moisture-sensing devices are encouraged.
 - (e) Whenever possible, automatic irrigation systems should be operated between the hours of midnight and 6:00 a.m. to reduce fungus growth and loss of water due to evaporation.

5. Public Landscaping Controls

- A. All city, county, state, and federal development programs must be in compliance with the established city landscape ordinance.
- B. All city development projects shall have written into every contract or subcontract, stipulations that the landscaping requirements will be met including protection of trees that are greater than 8” caliper or 24” diameter.

6. Miscellaneous Provisions

Screening Requirements in lieu of dividing fence: all plants used for landscape screens shall be planted in a dense pattern and shall, upon reaching maturity, be not less than six feet in height. Landscape screening shall be installed at the same time as the building construction. Trees or

shrubs, if used for such screening, shall be considered as a part of the overall landscaping requirement.

In a residential zone, landscaping materials used as a hedge or screen must be maintained at a height not to exceed forty inches (40") when located in the front yard forward of the front most element of the house.

A qualified representative of the Building Inspection Department will inspect all landscaping and no permanent certificate of occupancy and use or similar authorization will be issued unless the landscaping meets the requirements provided herein. The Chief Building Official or Planning Director may allow occupancy provided a contract to complete landscaping is provided and if there are some special circumstance why the landscaping cannot be provided at the time of final inspection.

Section 11.05 Maintenance Requirements

The owner of a site, or his agent, or tenant shall be responsible for the maintenance of all landscaping. Plants shall be maintained in good condition so as to present a healthy, neat and orderly appearance and shall be kept free from refuse, debris and weeds. Any plant used for credit must be replaced within six months or one growing season in case of plant death, freeze or other damage. Plants that have died must be removed within thirty days.

Section 11.06 Protected Trees

A. Any tree measuring twenty-four inches (24") or more in circumference or with a caliper of eight inches (8") or more will be considered a "protected tree" and may not be removed unless one of the following mitigation conditions is met:

1. Build around the tree and receive a landscaping credit of 200 square feet, to offset other landscaping requirements for each protected tree left on the property.
2. Transplant the protected tree to another part of the property, or if that is not feasible,
3. Cut down the tree and plant two trees of at least four inches (4") caliper (or four trees of at least 2" caliper) for each tree removed either on the subject property or on public property.

Such trees shall be identified on the landscape plan submitted for approval under General Requirements.

B. Tree removal permits without building permits.

1. Any person who wishes to remove any protected trees on a site in a non-residential zone for which a building permit is not required, shall submit a tree-removal permit application to the Planning Department at least five working days before such removal and shall comply with the mitigation conditions listed above (A2 or A3).
2. The following items are required to obtain a tree removal permit:
 - a. Name, address and phone number of applicant

- b. Legal owner's name
 - c. Address or legal description of property where trees are to be removed (trees must be tagged with a colored ribbon before on-site inspection.)
 - d. Written statement indicating the reason for removal of protected trees
 - e. General description of trees to be removed (caliper, condition, type, etc.)
 - f. Name and address of contractor who is charged with removing the trees
 - g. Which mitigation method will be chosen and how it will be accomplished
 - h. Any other pertinent information
3. Such permit application will be \$20 to cover the cost of site inspection
 4. Should such permit be denied, the Director of Planning or designee, shall provide, in writing to the applicant, the reasons for the denial and will recommend alternatives to assist the owner in complying with the ordinance and/or to avoid destruction of the tree(s). Appeals to this process may be filed in accordance with the variance section of the Zoning Ordinance (Section 18.04)

C. Exempt Trees

Trees that have been determined to have fallen on their own or those that are determined to pose a safety hazard by the Planning Director shall be exempt from the provisions above.

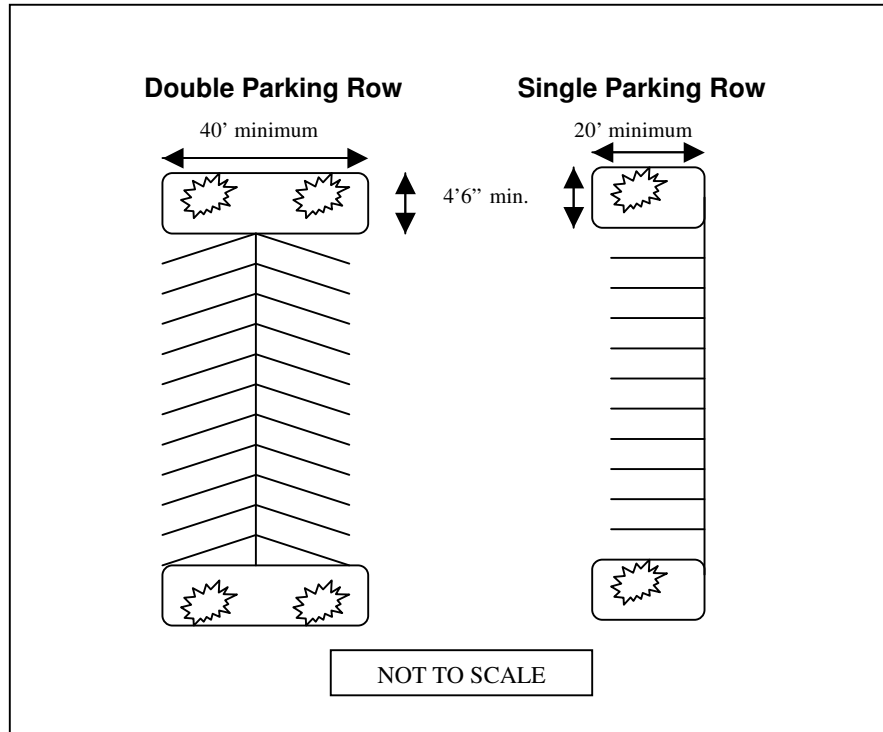
Section 11.07 Minimum Requirements for Interior Parking Lot Landscaping

Landscaping areas shall be provided for interior parking areas whether they are done as part of a construction project requiring a building permit or as a stand-alone parking lot, so as to improve drainage and provide visual and thermal relief from broad expanses of pavement and to channel and define logical areas for pedestrian and vehicular circulation. For parking lots containing twenty (20) or more parking spaces, landscaping islands shall be required as follows:

- A. Single row parking areas: A raised island, not less than six inches (6") in height, four and one half feet (4'6") in width and twenty feet (20') in length, shall be located at both ends of every single parking row. The island shall contain no less than one tree and shall not contain any impervious surfaces.
- B. Double row parking areas: A raised island, not less than six inches (6") in height, four and one half feet (4'6") in width and forty feet (40') in length, shall be located at the end of each row. The raised island shall contain at least two trees and shall not contain any impervious surfaces.
- C. Landscaping shall be located such that no parking space is more than seventy feet (70') from a portion of the required landscaped open space.
- D. All landscaped areas shall be protected from vehicular encroachment by curbs, wheel stops or other similar devices.

- E. All parking lot landscaping required may be counted toward the overall required landscaping for the site if it is not a stand-alone parking lot, in which case only the requirements listed above shall apply.

Figure 1



11.08 Violations and Enforcement

Should any tree or other vegetation required under this ordinance die or be removed, it must be replaced within six months or one growing season days of such removal. All dead vegetation shall be removed within 30 days. A violation of this section of the ordinance shall constitute a zoning violation and carry the same penalties as shown in Section 19.

11.09 Recommended Plant List

The following landscape materials are acclimated to the Rio Grande Valley Region of Texas. Due to the variety of planting and soil conditions, the City of Harlingen does not warrant the survival or prosperity of any plant material included in this list. This list may, from time to time, be updated without requirement to go before City Commission for approval. A brochure listing native plants may also be available from the Planning Department upon request.

TREES:

Common & Scientific Name	Remarks
Live Oak (<i>Quercus virginian</i>)	60 ft., drought and freeze hardy, acorn fruit, plant in big open areas
Wild Olive (<i>Cordia boissierei</i>)	20 ft., white showy flowers, drought and freeze hardy to 20F
Texas Persimmon (<i>Diospyros texana</i>)	15 ft., attractive bark, fragrant blooms, drought and freeze hardy
Montezuma Baldcypress (<i>Taxodium mucronatum</i>)	50 ft., evergreen, bronze foliage in fall, drought and freeze hardy
Yaupon Tree (<i>Ilex vomitoria</i>)	25 ft., evergreen, red fruit in winter, drought and freeze hardy
Mexican Ash (<i>Fraxinus berladieriana</i>)	30 ft., attractive bark, pest free ash, drought and freeze hardy
Abacua (<i>Ehretia anacua</i>)	40 ft., dense foliage, fragrant flowers, drought and freeze hardy
Ebony (<i>Pithecellobium flexicule</i>)	50 ft., dark green foliage, evergreen, freeze and drought hardy
Huisache (<i>Acacia farnesiana</i>)	30 ft., fragrant orange blossoms, drought, flood and freeze hardy
Retama (<i>Parkinsonia aculeata</i>)	32 ft., airy branching, striking yellow flowers
Mesquite (<i>Prosopis glandulosa</i>)	30 ft., airy branching, fragrant flowers, drought and freeze hardy
Persimmon (<i>Diospyros texana</i>)	Good near power lines, slow growth
Ficus (<i>Ficus retusa nitida</i>)	Freeze damage possible, aggressive roots
Crape Myrtle (<i>Lagerstoemia indica</i>)	Many varieties available

PALMS:

Common & Scientific Name	Remarks
Sabal Palm (<i>Sebal texana</i>)	50 ft., Valley native, drought and freeze hardy at 12F
California Fan Palm (<i>Washingtonia filifera</i>)	30 ft., disease, drought and freeze hardy at 15F
Mexican Fan Palm (<i>Washingtonia robusta</i>)	50 ft., disease, drought, and freeze hardy at 20F
Mediterranean Fan Palm (<i>Chamaerupe humilis</i>)	15 ft., pest, drought, and freeze hardy at 10F, blue-green leaves
Pindo Palm (<i>Butia capitata</i>)	15 ft., drought, flood and freeze hardy at 15F, attractive trunk
Queen Palm (<i>Arecastrum romanzoffianum</i>)	freeze damage possible

SHRUBS:

Bougainvillea (<i>Bougainvillea spp.</i>)	Many varieties available
Hibiscus (<i>Hibiscus rosa-sinesis</i>)	Many varieties available
Lantana (<i>Lantana camara</i>)	Many varieties available
Liriope (<i>Liriope muscari</i>)	Many varieties available

GROUND COVER:

Asiatic Jasmine (<i>Trachelospermum asiaticum</i>)	Dense low growing evergreen, drought and shade tolerant, freeze hardy to 20F
Hybrid Daylily (<i>Hermerocallis hybrid</i>)	Various colored blooms, medium drought hardy, full sun or partial shade
Society Garlic (<i>Tulbaghia violacia</i>)	Pink blooms, grass-like plant, drought tolerant, full sun, ever blooming
Gerber Daisy (<i>Gerbera jamesonii</i>)	Bold pink, coral, orange, red, yellow, needs water, needs iron

Common & Scientific Name	Remarks
Mexican Heather (<i>Cuphea hyssopifolia</i>)	Continuous pink-purple blooms, fern-type leaves, needs water
Shasta Daisy (<i>Chrysanthemum x superbum</i>)	White and yellow blooms, evergreen, needs water
African Iris (<i>Morea iriodes</i>)	White blooms, drought hardy
Red Flowering Yucca (<i>Hesperaloe parviflora</i>)	Reddish-pink blooms, blue-green ribbon leaves, drought and freeze hardy
Lily Turf (<i>liriope muscari</i>)	Broad leaf, grass-like plant, drought and freeze hardy
Wedelia	Drought resistant, lush, dark green with yellow flowers