

# CHAPTER 7. SUPPLEMENTAL DEVELOPMENT STANDARDS

## ARTICLE 2: LANDSCAPING AND SCREENING

### DIVISION 4: INSTALLATION AND MAINTENANCE

#### Section 7.2.4.1 Installation

- A. All landscape materials shall be selected and installed according to:
1. ANSI Z60.1 American Standard for Nursery Stock, most current edition;
  2. ANSI A 300 –Standard Practices for Tree, Shrub and other Woody Plant Maintenance, most current edition and parts; and
  3. The City of San Marcos preferred plant list.
- B. Shade Trees. Shade Trees planted for credit under Section 7.2.1.1 or Section 6.4.1.1 must be a native or locally adapted species included on the preferred plant list with an expected mature height of 35 feet or greater and an expected mature crown spread of at least 30 feet or greater unless subject to an overhead power line in which case the mature height may be less.
1. All shade trees planted must have a minimum caliper of 2.5 inches measured at 6 inches from the root collar, with a minimum container size of 45 gallons and be at least 9.5 feet on slower growing trees to a maximum of 16 feet tall at time of planting.
- C. Understory ~~trees~~.
1. Understory trees planted to meet the landscaping requirements must be a locally adapted species with an expected mature height of at least 8 feet and an expected mature crown spread of at least 8 feet.
  2. Single-stem understory trees planted to meet the landscaping requirements must have a minimum caliper of 2 inches measured from the root collar, with a minimum container size of 20 gallons and be at least 6 feet tall at time of planting.
  3. Multi-stem understory trees planted to meet the landscaping requirements must be at least 6 feet tall at time of planting with a minimum container size of 20 gallons.
- D. Shrubs, vines and ground cover. Shrubs must be, at a minimum, a one-gallon container size at the time of planting. Ground cover may include one or a combination of any pervious materials including grass, mulch, stone and pavers.
- E. ~~Turf g~~Grass areas.
1. ~~Turf g~~Grass areas ~~are encouraged to~~shall be planted in drought-tolerant species normally grown as permanent lawns in the City, including Zoysia, Bermuda, Buffalograss, Habiturf (combination of Buffalograss, Blue Grama, and Curly Mesquite) (~~Habiturf~~) or other drought-tolerant turf grass varieties as approved by the City in consultation with Texas A&M Agrilife Extension and/or Lady Bird Johnson Wildflower Center.
  2. In single-family residential homes, turf grass areas shall be limited to a maximum of 50% of the total provided landscaped area.
  3. In all other developments, turf grass areas shall be limited to a maximum of 25% of the total provided landscaped area.
- ~~14.~~ ~~\_\_\_\_\_~~ ~~Turf g~~Grass areas may be sodded, plugged, sprigged or seeded, except that solid sod shall be used in swales, other areas subject to erosion, or as required in a Watershed Protection Plan.
2. ~~In new residential developments, developers and homebuilders are encouraged to offer low water use landscape alternatives, such as Zoysia, Habiturf or buffalo grass.~~
- F. Soils. New landscaped areas ~~should~~shall be prepared so as to achieve a soil depth of at least ~~six~~ 6 inches ~~for turf.~~ A soil depth of 12 to 18 inches should be used for perennials and shrubs, and 18-24 inches for trees. The six-inch soil depth shall ~~should~~ consist of at least 75% soil blended with 25% compost blended with soil.
- G. Architectural planters. The use of architectural planters may be permitted in fulfillment of landscape requirements.
- ~~H. Turf areas. Except in residential developments, turf areas should be limited to a maximum of 25% of the total required landscaped area.~~
- ~~H.~~ Xeriscape materials. Developers and homebuilders are encouraged to plant native, adapted, and non-invasive xeriscape plants and trees in addition to using other materials such as mulch and compost to promote use of water-wise landscaping ~~such as mulch and compost.~~
- ~~J.~~ Other
1. Any approved decorative aggregate or pervious brick pavers shall qualify for landscaping credit if contained in planting areas, but no credit shall be given for concrete or other impervious surfaces.
  2. Pursuant to TAC 202.007, property/home owner's associations shall not restrict or prohibit ~~turf or~~ landscaping materials that promote water conservation.
- ~~K.~~ Landscape irrigation.
1. All required landscaping areas shall be capable of being 100% irrigated by one of, or a combination of, the following methods:

- a. A hose attachment within 100 feet of all plant material, provided, however, that a hose attachment within 200 feet of all plant material in non-street yards shall be sufficient;  
~~An automatic underground irrigation system with a rain sensor and freeze sensor;~~
- b. A rain water catchment system; A drip irrigation system;
- c. Type 1 or 2 non-potable water; ~~A hose attachment within 100 feet of all plant material, provided, however, that a hose attachment within 200 feet of all plant material in non-street yards shall be sufficient;~~
- d. An above-ground drip irrigation system such as soaker hoses; or Rain water catchment system; or
- e. An automatic underground irrigation system with a separate, dedicated irrigation meter ~~Type 1 or 2 non-potable water.~~

- 2. All irrigation systems shall be designed and sealed in accordance with the Texas Licensed Irrigators Act and shall be professionally installed.
- 3. No irrigation shall be required for undisturbed natural areas or undisturbed existing trees.

**LK.** Construction Phase.

- 1. The permanent vegetation should be installed on the construction site as soon as utilities are in place and final grades are achieved. Final grading and removal of vegetation shall not occur more than 30 days prior to scheduled paving.
- 2. Landscaping should be mulched to a depth of 2-4" and devoid of weeds and trash. Newly planted trees shall be mulched in a 4 foot radius or 8 foot diameter. The mulch will be kept 6 to 8 inches away from the tree trunk.

**ML.** Removal of Diseased or Dangerous Trees and Vegetation.

- 1. A property owner may be required to treat or remove trees suffering from transmittable diseases or pests or allow the City to do so, charging the actual cost thereof to the property owner.
- 2. The Responsible Official may require the removal of a tree or part of a tree or any other vegetation that is within or overhanging a public right-of-way or easement if the tree or vegetation:
  - a. Is diseased or infested and in danger of falling;
  - b. Is creating a traffic hazard or sight distance hazard for traffic on a public street; or
  - c. Is interfering with safe and proper maintenance of the right-of-way or easement.

**Section 7.2.4.2 Maintenance**

- A. The owner of the building, or the manager or agent of the owner, shall be responsible for the maintenance of all landscape areas.
- B. The areas shall be maintained so as to present a ~~healthy,~~ neat and orderly appearance at all times and shall be kept free of refuse and debris.
- C. All planted areas shall be provided with a readily available water supply and watered sufficiently to ~~ensure continuous healthy growth and development~~ maintain plant viability.
- D. All trees shall be maintained in accordance with the ANSI A300 Pruning Standard and ANSI Z133.1 Safety Standards. It is encouraged that work is completed by a Certified Arborist licensed by the International Society of Arboriculture, bonded, and insured.
- E. Maintenance shall include the replacement of all dead plant material needed to meet the requirements of this Article. Should a tree die or be removed for which credit has been obtained pursuant to this Land Development Code, trees sufficient to equal the area credited shall be required. A smaller tree that will have a mature crown similar to the tree removed may be substituted if the planting area or pervious cover provided for the larger tree is retained

**CHAPTER 8. DEFINITIONS**

**ARTICLE 1: DEFINED TERMS**

"Grass". See "turf or turf grass."

"Turf or turf grass" means a surface layer of soil bound by grass and its roots into a thick mat that requires regular maintenance, mowing and watering.

Sec. 14.126. - Landscape irrigation systems.

- (a)- Landscape irrigation rule. The landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapter A, § 344.1, Subchapter C, §§ 344.30—344.38, Subchapter D, §§ 344.40—344.43 and Subchapters E and F, §§ 344.50—344.65, Texas Administrative Code (effective January 1, 2009), as the same may be from time to time amended, are hereby adopted by reference as the landscape installation irrigation rules of the city.
- (b)- P2609 Landscape irrigation. The International Residential Code, 2015 Edition, as adopted by the International Code Council, Inc., in cooperation with the International Conference of Building Officials and with all local amendments as previously adopted by the City of San Marcos is hereby amended to add Section P2610 to Chapter 26, General Plumbing Requirements and to read as follows.
- (c)- Minimum standards for landscape irrigation systems. The landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapter A, § 344.1, Subchapter C, §§ 344.30—344.38, Subchapter D, §§ 344.40—344.43 and Subchapters E and F, §§ 344.50—344.65 Texas Administrative Code (effective January 1, 2009), as the same may be from time to time amended, are hereby adopted by reference as the landscape installation irrigation rules of the city.
- (d)- Valid license required and exemptions.
  - (1)- Any person who connects an irrigation system to the water supply within the City or the City's extraterritorial jurisdiction (ETJ), must hold a valid license, as defined by Title 30, Texas Administrative Code, Chapter 30 and required by Chapter 1903, Subchapter F of the Texas Occupations Code, or as defined by Title 22, Chapter 365 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code.
  - (2)- A property owner is not required to be licensed in accordance with Texas Occupations Code, Title 12, § 1903.002(c)(1) if he or she is performing irrigation work in a building or on a premises owned or occupied by the person as the person's home. A home or property owner who installs an irrigation system must meet the standards contained in Title 30, Texas Administrative Code, Chapter 344, Sections:
    - 344.50 (Backflow Prevention Methods),
    - 344.51 (Specific Conditions and Cross-Connection Control),
    - 344.52 (Installation of Backflow Prevention Device),
    - 344.60 (Water Conservation),
    - 344.61 (Minimum Standards for the Design of the Irrigation Plan, except (c)(1)) and,
    - 344.62 (Minimum Design and Installation Requirements, except (o)).
  - (3)- Upon completion of the irrigation system, the home or property owner must prepare and retain an irrigation plan that shows the actual installation of the system.
  - (4)- As provided in the Texas Occupations Code § 1903.002 for other exemptions to the licensing requirement.
- (e) Permit required and exemptions.
  - (1)- Any person installing an irrigation system within the territorial limits or extraterritorial jurisdiction of the City is required to obtain a permit from the City. Any plan approved for a permit must be in compliance with the requirements of this chapter. The permit will be issued by the permit center a division of Planning and Development Services.
  - (2)- The permitting requirements do not apply to:

- a. An irrigation system that is an on-site sewage disposal system, as defined by Section 366.002, Health and Safety Code; or
  - b. An irrigation system used on or by an agricultural operation as defined by Section 251.002, Agriculture Code; or
  - c. An irrigation system connected to a groundwater well used by the property owner for domestic use.
- (f)- Backflow prevention methods and devices. All irrigation systems must comply with the adopted City of San Marcos Article 9 - Cross Connection Control and Backflow Prevention Requirements.
- (g)- Water conservation. All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation.
- (h)- Design and installation.
- (1)- Irrigation plan design and installation shall meet the minimum standards and rules of the Texas Administrative Code.
  - (2)- Beginning January 1, 2010, either a licensed irrigator or a licensed irrigation technician as defined by Title 30, Texas Administrative Code, Chapter 30 and required by Chapter 1903 of the Texas Occupations Code, or as defined by Chapter 365, Title 22 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code, shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not on-site, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.
  - (3)- Completion, maintenance, alteration, repair, or service of irrigation systems shall comply with the landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapter A, § 344.1, Subchapter C, §§ 344.30—344.38, Subchapter D, §§ 344.40—344.43 and Subchapters E and F, §§ 344.50—344.65 Texas Administrative Code (effective January 1, 2009), as the same may be from time to time amended.
- (i) In addition to the requirements under 30 TAC Chapter 344, all new landscape irrigation systems must be designed, installed and operated in accordance with the following requirements:
- (1)- A separate metered water service must be utilized for the landscape irrigation system.
  - (2) Above-ground emission devices must be attached to lateral lines with flexible pipe or swing joints.
  - (23)- Use of shrub risers is prohibited. Surface or subsurface drip irrigation, or low-angle spray heads that direct water to the base of the plant may be used in lieu of shrub risers.
  - (34)- Irrigation controllers must be capable of providing multiple irrigation programs, with at least three (3) start times per program.
  - (45)- Irrigation controllers must be capable of limiting irrigation frequency to once every seven (7) days and once every fourteen (14) days as per drought restrictions.
  - (56)- Irrigation controllers must have a water budgeting feature.
  - (67)- Landscape irrigation systems must have a master valve.
  - (78)- Zone valves must be equipped with an adjustable flow control.
  - (89)- Zone valves must be enclosed in an accessible valve box.
  - (910)- Check valves are required where elevation differences may result in low-head drainage. Check valves may be located at the sprinkler head(s) or on the lateral line.
- (j) All new ICI and multi-family residential landscape irrigation systems must also be designed, installed and operated in accordance with the following requirements:

~~(1) A separate metered water service must be utilized for the landscape irrigation system.~~

- (21)- Landscape irrigation systems must be equipped with a flow sensor that will automatically shut down the irrigation system during excessive water flows.
- (32)- Landscape irrigation systems must be equipped with a freeze sensor that will automatically shut down the irrigation system when ambient temperatures fall below 32 degrees F.
- (43)- An irrigation system evaluation must be conducted at least once per year, and the results of the evaluation shall be provided to the director.
- (k)- All existing landscape irrigation systems must be retrofitted with a rain shutoff device or soil moisture shutoff device.
- (l) Existing ICI and multi-family residential landscape irrigation systems must have an irrigation system evaluation conducted at least once per year, and the results of the evaluation shall be provided to the director.
- (m)- Reclaimed water. Reclaimed water may be utilized in landscape irrigation systems if:
  - (1)- There is no direct contact with edible crops, unless the crop is pasteurized before consumption;
  - (2)- The irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;
  - (3) The irrigation system is installed using purple components;
  - (4)- The domestic potable water line is connected using an air gap or a reduced pressure principle backflow prevention device, in accordance with Title 30, Texas Administrative Code, Section 290.47(i) (relating to Appendices);
  - (5)- A minimum of an eight-inch by eight-inch sign, in English and Spanish, is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER — DO NOT DRINK" and "AGUA DE RECUPERACION NO BEBER"; and
  - (6)- Backflow prevention on the reclaimed water supply line shall be in accordance with the regulations of the City's water provider.
- (n)- Items not covered by this article. Any item not covered by this article and required by law shall be governed by the Texas Occupations Code, the Texas Water Code, Title 30 of the Texas Administrative Code, City of San Marcos Plumbing Code and any other applicable state statute or Texas Commission on Environmental Quality rule.
- (o) Enforcement.
  - (1)- The City shall have the power to administer and enforce the provisions of this chapter as may be required by governing law. Any person, firm, corporation or agent who shall violate a provision of this code, or fails to comply therewith, or with any of the requirements thereof, is subject to suit for injunctive relief as well as prosecution for criminal violations. Any knowing violation of the elements of this [article] as codified in the San Marcos Code is declared to be a nuisance.
  - (2)- The City water purveyor can suspend utility service for any violation of this article.
  - (3)- Any person who knowingly violates any provision of this section shall, upon conviction, be fined a sum as provided in chapter 1, subsection 1.015(a) of the San Marcos Code.
  - (4)- An offense under this section is a Class C misdemeanor.
  - (5)- Nothing in this section shall be construed as a waiver of the City's right to bring a civil action to enforce the provisions of this section, or any other building code violation, and to seek remedies as allowed by law, including, but not limited to the following:
    - a. Injunctive relief to prevent specific conduct that violates the ordinance or to require specific conduct that is necessary for compliance with the ordinance; and

b. Other available relief.

(6)- Whenever a corporation or association violates any provision of this section, the president, vice-president, secretary, treasurer, manager or any agent or employee of the corporation or association who is responsible for the violation shall be subject to the penalty prescribed for the violation.

(p)- Fees. The City Council, by separate ordinance, may create a schedule of fees for obtaining and renewing an irrigation permit. These fees will be in amounts sufficient to cover the City's costs in issuing and renewing the permits, including, but not limited to, staff time and other costs.

( [Ord. No. 2015-21, § 1, 7-7-15](#) )