



LANDSCAPE AND IRRIGATION PLAN PREPARATION GUIDELINES

The Parks Planning and Development Division of the City of Modesto's Parks, Recreation and Neighborhoods Department is responsible for the task of reviewing all new commercial and residential subdivision landscape and irrigation plans. The review of these plans will be handled by Loren Holt, Parks Project Coordinator (209) 571-5573. All questions relating to these preparation guidelines should be directed to him. The following are guidelines only. Please refer to the Modesto Municipal Code and the State of California Model Water Efficient Landscape Ordinance for more in-depth information. Landscape and Irrigation plans should be submitted to the City's Building Services Division, Suite 3100, 1010 Tenth Street and are to be included with your Building Plan set submittal when applying for a building permit.

1. APPLICABILITY

All commercial projects, including multi-family units, are governed by the following standards of landscape and irrigation design. The Modesto Municipal Code states the conditions that require landscape plan submittal. Landscape areas of 10,000 square feet and under are subject to requirements as defined in the Code, Chapter 1 of Title 12. All landscape areas in excess of 10,001 square feet will be subject to all portions of the State of California Model Water Efficient Landscape Ordinance, except for Section 493, Provisions for Existing Landscapes.

One model home in subdivisions of eight (8) or more homes shall be subject to applicable sections of the State Landscape Ordinance (MMC 12-1.09)

2. GENERAL REQUIREMENTS

- A. A licensed landscape professional must prepare plans. (MMC 12-1.03)
- B. Three (3) copies of the landscape and irrigation plans and one (1) copy of all building elevations and site grading plans shall be submitted for review. (MMC 12-1.04 a & b)
- C. Information to provide on plans: (MMC 12-1.04)
 - i. Project title, street address, parcel number, vicinity map and zoning.
 - ii. Owner's name, address and telephone number.
 - iii. Plan preparer's name, address and telephone number. Additionally, a wet stamp and signature is required on each plan prepared by a licensed landscape professional.
 - iv. Drawing sheet size shall be 24" x 36".
 - v. North reference and scale (nothing smaller than 1" = 20' will be accepted).
 - vi. Indicate all property boundaries.
 - vii. Locate all slopes, top and toe.
 - viii. Identify adjacent property uses (e.g., vacant lot, gas station, residential, etc.).
- D. Prior to plan preparation, contact the City's Community Forestry Division at (209) 342-2233 to ensure compatibility of design with the city's tree planting plan. (MMC 12-1.03a)
- E. Prior to plan preparation, contact Underground Service Alert (800) 227-2600 and Modesto Irrigation District (209) 526-7373 to avoid conflict with existing or proposed utility lines. Contact USA 48 hours prior construction. (MMC 12-1.03a)
- F. Parking lot landscape screening, 3 to 4 feet in height, shall be installed in a planter between a parking lot and a street.

- G. Planter dimensions shall be a minimum of four (4) feet by five (5) feet for each tree planted. (MMC 10-2.2006 a)
- H. All parking lots shall have deciduous shade trees planted at the ratio of one tree for every eight parking spaces. (MMC 10-2.2006 b)
- I. Shade trees shall be placed so as to provide 50% surface shading within ten (10) years. (MMC 10-2.2006 b)
- J. Within the clear vision triangle at corner lots, there shall be no plants or structures that exceed three (3) feet in height. (MMC 10-2.2006 a)

NOTE: *Underlined words are defined at the end of guidelines*

- K. Plans shall conform to any specific requirements of the Planning Commission, City Council or Board of Zoning Adjustment.

3. LANDSCAPE PLAN SPECIFICATIONS (MMC 12-1.03 a-f, MMC 12-1.04 a-g)

- A. Ninety percent (90%) of plants selected in non-turf areas are required to be drought-tolerant, requiring minimal water once established.
- B. Plants shall be spaced and sized so that, when mature, they will fill the planter area.
- C. Include a plant list giving the botanical and common names, size of plant, spacing and quantity to be used.
- D. All planter areas shall have a permanent border around the perimeter to prevent cars and pedestrians from damaging plant materials. Minimum inside dimension of the planter shall be forty inches (40"). (MMC 12-1.03 e)
- E. All compacted soils shall be cultivated or amended to a friable condition prior to planting.
- F. Plans shall indicate planting details, pre-emergent soil treatment rates and materials.
- G. A soil test for horticultural suitability and infiltration rates shall be required at time of landscape plan submittal. Soils shall be prepared and/or amended as appropriate to encourage successful plant growth.
- H. A minimum of three inches (3") of mulch shall be added to non-turf areas after planting, with care being taken to avoid mulching over crown of plants. **No sheet plastic will be allowed under mulch.**
- I. Turf will not be allowed in narrow strips of less than seven feet (7') wide, and on slopes that are in excess of 3:1.
- J. On slopes exceeding fifteen percent (15%), a level buffer zone of eighteen inches (18") is required between raised turf areas and paved surface.

4. STREET TREES

- A. Locate all existing street trees. Existing street trees shall be preserved and protected during construction. *See reference section at end of text.*
- B. Spacing of new street trees shall be approximately forty feet (40') on center. The City of Modesto's Community Forestry Division (209) 342-2233 will locate all new City street trees.
- C. Spacing of street trees in relation to obstructions shall be no closer than:
 - i. Street lights 25'
 - ii. Rockwells 10'
 - iii. Fire plugs 8'
 - iv. Driveways 10'
 - v. Utility lines 5'
 - vi. Intersection 25'
 - vii. Private trees 20'
- D. When feasible, existing trees shall be watered by the new irrigation system
- E. New trees shall be watered by at least one (1) bubbler and three (3') foot minimum tree deep root watering tube. (MMC12-1.05 h)

5. IRRIGATION PLAN SPECIFICATIONS (MMC 12-1.05 a-o)

- A. The system will be checked for effective placement and coverage of sprinkler heads.

- B. No overspray is allowed onto paved surfaces. Irrigation water must be contained on site.
- C. Modesto Municipal Code (MMC) regulations governing water waste and outdoor watering times shall be adhered to for the design and operation of the irrigation system.
- D. Indicate the size, location and static water pressure of the point of connection.
- E. Backflow device to be a reduced pressure principle device.
- F. List the maximum gallons per minute (gpm) or gallons per hour (gph) for each irrigation circuit.
- G. List the manufacturer and identification number of all equipment to be used.
- H. Show locations of all irrigation equipment to be used.
- I. Use irrigation details to clarify particular situations such as backflow prevention devices, emitters, rain switches, etc.
- J. Size all irrigation lines.
- K. Rain switches or moisture sensors are required.
- L. Schedule 40 PVC pipe or sleeving is required under all paved areas.
- M. Eighteen inches (18") of cover over non-pressure lines and twenty-four inches (24") of cover over pressure lines is required. Emitter distribution tubing may be located at grade.
- N. Provide a post-establishment water schedule for the year. The schedule is to be divided into four (4) seasonal quarters and must comply with the current City of Modesto watering restrictions. Post a copy at the controller.
- O. Pop-up sprinklers shall have a minimum four-inch (4") pop-up height. Spacing shall be at a maximum of fifty percent (50%) of diameter of throw. Sprinkler heads must have matched precipitation rates within each circuit.
- P. Spray heads shall not be used in areas less than eight feet (8') wide. Drip and bubblers shall be used that do not exceed 1.5 gallons per minute (gpm) per device.
- Q. Serviceable check valves are required where elevation differential may cause low head drainage.
- R. Irrigation controllers must be capable of dual or multiple programming. Controllers must have multiple cycle start capacity and flexible calendar programs. Controllers shall be set to operate between sunset and sunrise.
- S. Water application rates shall not exceed the infiltration rate of the soil. A minimum of a one-hour period shall be provided for prior to the application of additional water.

6. PLAN APPROVAL

The Parks Planning and Development Division will review and approve or reject submitted plans. Approved plans will be returned to Building Services Division to be included in the final approved building plan set. Plans that are not approved will be returned to the owner or owner's rep with redline comments.

7. INSPECTION

When the contractor is ready for the final inspection, the owner or contractor contacts the Parks Planning and Development Division (209) 571-5573 where an inspector will inspect the site to verify that the project has been installed as shown on the approved landscape plans.** (MMC 12-1.06)

<p>These plans have been reviewed by the Parks Planning and Development Division of the Modesto Parks, Recreation and Neighborhoods Department and are:</p>	
<input type="checkbox"/>	approved as submitted.
<input type="checkbox"/>	approved as submitted, with the following provisions:
<input type="checkbox"/>	returned to submitter for the following reasons:
<hr/>	
<hr/>	
<hr/>	
	<hr/> Manager/Coordinator
	<hr/> Date

Figure 1

****All approved drawings shall be stamped as shown in Figure 1.**

8. **MAINTENANCE**

Whenever a landscaping and irrigation plan is required by the Municipal Code, or as a condition of any action authorized by this code, it shall be a violation of this Code if a property owner fails to maintain his property in accordance with that approved landscape or irrigation plan. (MMC Section 12-1.07)

9. **FEES**

A landscaping and irrigation plan review fee shall be paid to the Chief Building Official when a plan review is requested. The landscape inspection fee shall be paid before the building permit is issued. The amount of both fees will be calculated by multiplying the total square footage of landscaped area times a rate determined from time to time by resolution of the City Council. (MMC 12-1.08) The Chief Building Official is located with the Building and Development Services Division.

DEFINITIONS

Landscape area: The total area of the site not covered by buildings, parking lots, driveways or street; and shall include planting areas, patios, plazas, sidewalks, hard courts, water features and parkway areas. (MMC Section 12-1.02)

Licensed Landscape Professional: Can be a licensed landscape architect, landscape contractor, architect or engineer. A certified irrigation designer may prepare irrigation plans. (MMC Section 12-1.03a)

Parking Lot Landscaping Screening: Between all parking areas and a street, there shall be evergreen plant material for screening at a maintained height of three (3) to four (4) feet. The planter for this planting shall be a minimum of forty inches (40") wide. A decorative masonry wall with plant material can be used to achieve the desired screening. (MMC Section 10-2.2006a)

Clear Vision Triangle: On all corner lots, in zones with a required front yard, this triangle is defined as an area bounded by the front and side property lines and a line connecting them at two (2) points twenty-five feet (25') back from their intersection. Within this triangle, no plant material or structure may exceed three feet (3') in height, measured from top of the adjacent curb. (MMC Section 10-2.2314)

REFERENCES

1. **Modesto Municipal Code** - Current edition, including ordinance No. 2836-C.S., which amends Chapter 1 of Title 12 to reflect the current landscaping and irrigation standards. Available at Modesto City Clerk's office for \$0.35 per sheet or online at <http://www.modestogov.com/ccl>.
2. **State of California Model Water Efficient Landscape Ordinance** - 6/92. Available online at <http://www.dpla.water.ca.gov/cgi-bin/urban/conservation/landscape/ordinance>. Also available in the reference section at the Stanislaus County Library, 1500 I Street, Modesto, CA.
3. **Irrigation Water Needs of Landscape Plants in California** – 1999. Costello and Jones, UC Cooperative Extension.

4. Estimating Water Requirements of Landscape Planting – The Landscape Coefficient Method. Available from the University of California Cooperative Extension. Leaflet #21493.
5. Tree Protection During Construction – Copies available from the City of Modesto Community Forestry Division (209) 342-2233.