Landscape Design Criteria - Ventura County

October 1992

Resource Management Agency

County of Ventura • 800 South Victoria Avenue • Ventura, CA 93009

ACKNOWLEDGMENTS

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A. Purpose

General

The purpose of this guide is to clearly define the manner in which landscape plans shall be submitted to satisfy the landscaping requirements of the County of Ventura. It is the intent of this guide to offer the applicant as much latitude as possible when designing the project landscaping, while at the same time meeting the minimum landscape standards of the County. The applicant is encouraged to take full advantage of the wide range of landscape materials including native plant materials and design possibilities within the framework established by this guide. Overall, this guide will explain the processing steps involved for landscape plan approval, requirements for submittal of landscape plans and minimum landscape standards. This document replaces the Ventura County "Guide to Landscape Plans" (1988).

Water conservation through landscaping offers the greatest single opportunity for water savings in the urban area. About 40 percent of urban water is used to irrigate landscaped areas in California. A water-efficient landscape includes water-efficient plants, efficient irrigation systems, proper soil preparation, maintenance and watering schedule. Due to the increasing demand for water and the limited supply in our County, water-efficient landscaping shall be required in new developments and modification of existing developments.

The Planning Director or his designee may waive any requirement of these guidelines as necessary.

B. Processing Procedures

Any discretionary development permit approved by the County may be conditioned to require permanent landscaping. Renovation of an existing landscape in conjunction with a discretionary permit also must comply with these guidelines. This may occur, for example, when there is a proposed modification to a commercial or industrial use permit. The steps in processing landscape plans are as follows:

1. **Pre-Submittal Meeting:** A pre-submittal meeting familiarizes the applicants and their architect or consultant and landscape architect with the County's review process, and identifies the information and materials necessary to file landscape plans. A pre-submittal meeting can be arranged by contacting the Planning Division.
2. **Landscape Package Submittal:** After the applicant has prepared all the information identified during the pre-submittal meeting, the landscape package shall be formally submitted with the required deposit fee in accordance with adopted fee schedule and signed Reimbursement Agreement. (See Attachment 1)
3. **Plan Review:** Upon receipt of the landscape package, the County case planner shall review it for completeness and forward it to the County's consulting landscape architect for review. The consultant's review, which normally takes two weeks, consists of an on-site inspection and package review for consistency with County standards as outlined by this guide. Upon completion of the review, the consultant returns the package to the Planning Division with recommendations for approval or modification. This process is repeated until approval is achieved.
4. **Approval:** Based upon the recommendations of the County's consulting landscape architect and case planner, the Planning Director shall approve the project's landscape package.
5. **Guarantee/Surety:** A surety bond may be required as a condition of approval in the following cases:
   a. To assure plant viability at least one year after installation.
   b. To assure installation of plants after issuance of a zone clearance by Planning and Certificate of Occupancy by Building and Safety. (This would normally be allowed only on non-sloped areas of residential projects where the applicant is providing landscaping).
6. **Installation and Inspection:** Landscaping for commercial, industrial and residential sloped areas shall be installed prior to issuance of a Certificate of Occupancy by the County Building and Safety Division. The applicant's landscape designer shall be required to certify in writing to the Planning Director that all work has been completed in accordance with the approved plans and specifications. The County's landscape consultant will conduct the final landscape inspection after receipt of the certification. (See Section F-Approval/Installation Verification and Attachment 2)
7. **Exoneration of Surety:** If, upon final landscape inspection, it is determined that the landscaping and irrigation have been installed in accordance with the approved plans, the Planning Division will return the guarantee/surety to the applicant.

8. **Enforcement:** Discretionary development permits may be conditioned for follow-up inspections to verify a maintenance program, water management auditing, or compliance with environmental mitigation measures. Failure by the applicant, successor in interest, or homeowner's association to maintain installed common area landscaping and/or irrigation systems will constitute a violation of the Conditions of Approval and/or Mitigation Measures of the development permit. (See Section G-Enforcement)

C. Submittal Requirements

The project's landscape package shall be prepared by a California Registered Landscape Architect, unless waived by the Planning Director or designee. Submittals shall include the following:

1. **Plan Check Fee:** The applicant shall pay the deposit fee in accordance with adopted fee schedule and submit a signed reimbursement agreement (see Attachment 1) to cover landscape review and inspection. Fees shall include any required follow-up inspections.
2. **Planting Plan:** The planting plan shall be drawn on clear and legible base sheets prepared specifically for the landscape submittal. Three (3) copies shall be submitted at the time of filing. The following requirements and information shall be provided:
   a. **Size:** Plans shall not exceed 30" x 42" nor be less than 24" x 36" in size.
   b. **Scale:** The scale shall be at least 1" = 20'. For large scale projects such as golf courses, however, the scale can be reduced to 1" = 40' if all symbols are legible.
   c. **Title Block:** Indicate on all plans the names, addresses and telephone numbers of the applicant and landscape architect. Also, the project identification number shall be indicated (i.e., PD, DP, CUP, RPD, TRACT).
   d. **Post-Installation Maintenance Guidelines** (See Section F-Approval/Installation Verification)
   e. **Physical Characteristics:** The landscape plans should accurately and clearly portray the following features:
      - All existing trees and other significant landscape features;
      - Proposed landscape materials, trees, shrubs, groundcovers, etc.;
      - Property lines;
      - Streets, street rights-of-way, access easements and/or public or private driveways, walkways, bike paths and any other paved areas;
      - Buildings and structures;
      - Parking areas -- lighting and striping;
      - Grading areas -- top and toe of slopes, slope direction;
      - Utilities -- street lighting, fire hydrants, etc.;
      - Natural features -- water courses, rock outcroppings, etc.;
      - Existing native vegetation, on-site and on contiguous parcels, may be shown in a generalized manner; and
      - Fire Clearance Zone (if applicable, see Fuel Modification Zone).
   f. **Design Elements:** Planting plans may include design elements such as boulders, mounds, signs, sculptures, etc. All items shall be drawn to scale (at maturity size in the case of plant materials).
   g. **Planting Symbols:** These symbols shall be clearly drawn and labeled. If abbreviated (3 letter minimum) they shall have a key on each sheet by full botanic

name. Numeric or graphic definition alone is not acceptable. Container size and/or spacing and quantities shall be clearly indicated for each group of plants.

h. **Fuel Modification Zone (FMZ):** In high fire-risk areas, each structure will have a FMZ. The selection of fire resistant plants is required in these fire clearance zones. For more information, contact the Fire Safety Planning Officer - Ventura County Fire Protection District at 805/389-9733 (Diana Morgan).

3. **Irrigation Plan:** Irrigation plans shall be separate from the planting plan, but utilizing the same format. Plans shall show:

   a. **Valves, piping, controllers, heads, quick couplers**, etc. Show gallonage requirements and precipitation rates of each valve on the plan.

   b. **Design pressure as well as static pressure** (contact water company) and note reference engineer and date.

   c. **Point of connection** - location and size.

   d. **Backflow protection locations** as required and approved by the Ventura County Environmental Health Division (EHD). Contact EHD for the most recent list of backflow prevention devices and proper installation.

   e. **Legend** which shall include equipment manufacturer, type of equipment, model number, flow rate in gallons per minute (gpm) demand, operating pressure in pounds per square inch (psi), radius/diameter of coverage, remarks or special notes, and a reference to the corresponding detail number. All equipment shall be designed for installation per manufacturer's recommendation, Uniform Plumbing Codes and all local regulations.

4. **Water Budget and Projected Water Use:** Each landscape plan must have a water budget and projected water use calculations. Each project site is allowed a certain amount of water based upon the climate of the site and the total square footage of the planting area. Any plant can be used, provided the combined projected water use of all the plants does not exceed the water budget.

   A water budget calculation is based on the site's size and the reference Evapotranspiration (ET) factor. Included in the calculation of ET factors are evapotranspiration rates, precipitation rates, a crop coefficient and an allowance for uniformity. The reference ET factors for Ventura County are available by calling 805/644-4921 or 649-1643 (see Attachment 5).

   The water budget and projected water use calculations shall be submitted as part of the irrigation plan. The projected water use shall not exceed the water budget. A reproducible hydrozone map showing separation of planting areas with plant factors shall be submitted as part of the landscape package. (See Sample Plan and Calculation of a Project's Projected Water Use)

   Areas such as parks, golf courses or school yards where turf provides a playing surface may require additional water. A statement to that effect shall be included with the planting plan, designating areas to be set aside for such purposes. The designated recreation area may receive more water than the water budget allows on

a case-by-case basis. Such additional allocation shall be consistent with the County's policy regarding the use of reclaimed water for golf courses.

Calculating the Water Budget of a Project Site: A site's water budget is determined by multiplying the square footage of the planting area by the site's ET factor. After you have determined how much water is in your budget, you can then calculate the projected water use of your proposed planting plan. To calculate the water budget of a site use this formula:

Water Budget (Gallons/Year) = (ET) x (.8) x (LA) x (.62)

Water Budget	= Maximum Applied Water Allowance (gal/yr)
ETo	= Reference Evapotranspiration (inches/yr) (See Attachment 8)
.8	= ET Adjustment Factor
LA	= Landscaped Area (in square feet)
.62	= Conversion Factor (to gal./sq. ft.)

Three example calculations of water budgets for 50,000 square foot landscaped areas in Ventura County are:

Thousand Oaks: ETo = 51 inches/year
51" x (.8) x (50,000 sq. ft.) x (.62) =
1,264,800 gal/yr per 50,000 sq. ft. of landscaped area.

Ojai: ETo = 47.5 inches/year
47.5" x (.8) x (50,000 sq. ft.) x (.62) =
1,178,000 gal/yr per 50,000 sq. ft. of landscaped area.

Ventura: ETo = 43.5 inches/year
43.5" x (.8) x (50,000 sq. ft.) x (.62) =
1,078,800 gal/yr per 50,000 sq. ft. of landscaped area.

Since it is hotter and drier in Thousand Oaks, there is a higher evaporation rate (51 inches versus 47.5 inches in Ojai and 43.5 inches in Ventura). Therefore, a water budget allows for more water in Thousand Oaks than in Ojai or Ventura. This formula is based on California state law (Assembly Bill 325).

Calculating the Project Water Use of a Landscape Plan: The total amount of projected water use should be less than or equal to the site's water budget. To determine the plant factor, multiply the plant factor of each planting hydrozone by its square footage. Then add the results and complete the calculation of projected water use for the entire planting area. Generalized plant factors are: .3 = low water using plants, .5 = average water using plants, and .8 = high water using plants. These factors must be agreed upon by the designer and the County using plant factors from a County-recommended list. If a plant is not on the list, an equivalency determination will be made by the Planning Director. Any changes in the irrigation system or landscape will require new water projections. To calculate the projected water use of a landscape plan, use this formula:

Projected Water Use (Gallons/year) = $\frac{(ET) \times [(PF) \times (HA)] \times (.62)}{IE}$

ETo = Reference Evapotranspiration (inches/year)

PF = Plant Factor (.1 low through .9 high)

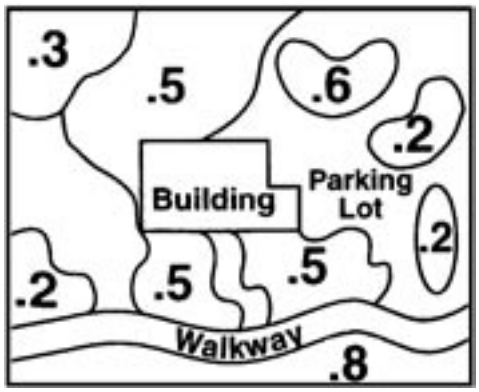
HA = Hydrozone Area (square feet)

(.62) = Conversion Factor (to gallons/square foot)

IE = Irrigation Efficiency (minimum .625)

For the purpose of determining the projected water use, irrigation efficiency is assumed to be .625 or better. Irrigation systems shall be designed, maintained and managed to meet or exceed .625 efficiency. If the plant factors average .5, the water budget will be met at an irrigation efficiency of .625.

Sample Plan and Calculation of a Project's Projected Water Use:



Site Area minus hardscape and buildings equals 50,000 square feet
Measure Hydrozone Areas (HA)
Determine Plant Factors (PF)

PF x HA	
.2 x (10,000)	= 2,000 sq. ft
.3 x (5,000)	= 1,500 sq. ft.
.5 x (20,000)	= 10,000 sq. ft.
.6 x (10,000)	= 6,000 sq. ft.
.8 x (5,000)	= 4,000 sq. ft.
(PF)(HA)	= 23,500 sq. ft.

Projected Water Use $\frac{51" \times (23,500) \times (.62)}{.625} = \frac{743,070}{.625} = 1,188,912$ gal/yr

Thousand Oaks site:

Water Budget	=	1,264,800	gallons/year
		minus	
Projected Water Use	=	1,188,912	gal/yr
		75,888	remaining gallons

Plan meets budget

5. **Maintenance Schedule:** A schedule for ongoing maintenance shall be prepared using guidelines in Section F-Approval/Installation Verification.
6. **Written Specifications/Applicable Details:** Three (3) copies of the details and specifications shall be provided for all facets of the landscape project, including planting, soil preparation, tree staking and guying, installation details and post-installation maintenance program, etc.

7. **Soil Test:** A soils report shall be prepared by a soil testing company and submitted with the plans. Backfill mixture and soil amendments shall be based on this analysis. As a minimum, the following shall be included:

    a. Determine soil texture, indicating an approximate soil infiltration rate.

    b. Test for pH, organic matter and soluble salts.

    c. Make specifications for amending soil.

    Amendments for improving water holding properties shall be noted. Delivery invoices of the soil amendments shall be submitted along with plan certification to the County's Landscape Consultant.

    Use of soil amendments produced from recycled yard trimmings or organic waste of local origin is encouraged, whenever feasible.

8. **Related Required Material:** One (1) copy of each of the following shall be submitted:

    a. Development Site Plan

    b. Architectural Elevations

    c. Grading Plan

    d. Permit Conditions of Approval initialed by the applicant's landscape architect.

D. Landscape Standards

Proposed plant materials should relate to the architectural design elements and be compatible with the character of adjacent landscaping, provided the quality of the adjacent landscaping meets the standards of this guide. Plant materials should also be compatible with any adjacent native plant communities or environmentally sensitive habitats. The following landscape standards for permanent landscaping are minimums. When special circumstances or exceptional characteristics are applicable to the property involved (size, shape, topography, etc.), the Planning Director may modify (reduce or increase) the standard(s), except as otherwise limited by the Zoning Ordinance Code.

1. **Minimum Site Coverage:** Landscape percentages shall be computed on the basis of the net project site area which includes the area of all structures, drives, walks, and parking on the site, but not areas dedicated for public right-of-way. The required percentages of landscaping relative to site area are as follows:
   - Industrial Zones: M-1 (10%); M-2 and M-3 (5%)
   - Commercial Zones ..... 10% *
   - Residential Zones ..... Specified by Permit

   * On commercial lots of less than 5,000 square feet, coverage requirements may be modified by the Planning Director, depending on architectural design. (Ordinance Code Section 8108-2.2)
2. **Planter Width:** Landscaped areas shall be a minimum of four (4) feet wide (excluding curbs). Narrower landscape areas may be permitted, but shall not be counted toward meeting the minimum coverage requirements.
3. **Parking Areas:** Parking areas shall provide landscaping in accordance with the following:
   a. **Uncovered parking areas** shall contain a minimum of ten percent (10%) of their area as landscaping, which is counted toward meeting the minimum site coverage requirements. Landscaping shall be computed on the basis of the net parking facilities, which includes parking stalls, access drives, aisles, and walkways, but shall not include required landscaping adjacent to streets.
   b. **Parking lot island shrubs** shall not grow above three (3) feet untrimmed.
   c. **A landscaping strip** shall be provided along property lines adjacent to any public or private street right-of-way Said planting strips shall not be less than five (5) feet wide for commercial lots and not less than ten (10) feet wide for industrial lots. Landscaping strips adjacent to major thoroughfares may be required to be greater.
   d. **All parking lot planting areas** shall be entirely enclosed within a concrete curb not less than six (6) inches high above paving.
   e. **Landscaping shall permit adequate sight distance** for motorists and pedestrians and shall not interfere with the effectiveness of parking lot lighting (see Public Works Agency requirements).
   f. **A minimum of one tree shall be installed within a tree well or planter area** of the parking lot for every ten (10) single row parking spaces or every ten (10) double row parking spaces. Tree wells shall be a minimum of four (4) feet by four (4) feet (excluding curbs).

g. **Concrete wheel stops shall be provided for all parking spaces.** The concrete curb around landscape planters may be utilized as a wheel stop provided the area of car overhang (2 ½ foot maximum) does not damage or interfere with plant growth or irrigation systems. If this alternative is utilized, minimum planter widths, including curb, shall be as shown on Attachment 3. Boulders, pop-up sprinklers and plants shall not interfere with overhang.

4. **Screening:** Landscaping is a preferred method to screen storage areas, trash enclosures, parking areas, public utilities, etc. At the time of installation, the screening must be at least 40 inches high either by landscape, berm or wall or combinations thereof.

5. **Street Trees:** Street trees may be required as a condition of the development permit. No street tree will be approved for planting where its growth will cause interference, obstruction, damage, or injury (either directly or indirectly) to use of a sidewalk or street right-of-way. Street trees shall be planted according to the following standards (See Attachment 4.)

   a. **Trees that typically grow taller than twenty (20) feet in height** and that do not lend themselves to top trimming will not be permitted under utility wires.

   b. **A minimum size of 24" box with minimum 1 ¼" caliper shall be required for each street tree.** Each tree shall be 8 to 12 feet high with a minimum two foot wide head.

   c. **Trees shall be standard single trunk** not multi-trunked.

   d. **Refer to Public Works Agency Transportation Department current list of street trees** (Robert Brownie 805/654-2080 see Attachment 4D).

6. **Use of Plant Materials:** The scope of a project will ultimately determine landscape plant selection. In order for landscaping to relate to architectural design, use the following criteria:

   a. **Trees are encouraged against buildings** to soften the appearance of blank expanses of walls and visually screen neighboring projects.

   b. **Deciduous trees are effectively used for solar energy control** in summer and winter. Some trees are flowering and are desirable as accents.

   c. **Large shrubs are used to screen undesirable views** and to act as intermediate height elements to bring buildings into human scale.

   d. **Medium/low shrubs are ornamental** and provide foliage, texture and color to landscape themes.

   e. **Vines and espaliers are effective screens** to visually soften walls and fences. Many vines provide excellent flower color to brighten narrow planters against building walls. Vines shall not be used where they will cause structural damage to walls.

   f. **The use of native plants, especially oaks and sycamores, is encouraged,** whereas invasive plants or "escaped exotics" shall be avoided adjacent to native areas and areas which drain to native areas (see Attachment 6). Informa-

tional brochures are available on low-water use plants and native plants from the Planning Division. A useful publication on native plants is *Selected California Native Plants with Commercial Sources*, Saratoga Horticultural Foundation, P.O. Box 308 20605, Verde Vista Lane, Saratoga, CA 95070.

g. **Two important aspects of a water-efficient landscape** are (1) placement or grouping of plants into hydrozones and (2) appropriate location with respect to slope and sun exposure. Plants can be grouped together in confined areas or placed in the shade to reduce their water needs. Plants must be grouped according to the amount of water they need and irrigated accordingly.

h. **Warm season drought tolerant turfs such as Bermuda and Zoysia are encouraged.**

7. **Groundcover:** Irrigated groundcovers may be planted from rooted cuttings or applied as hydromulch. Non-irrigated hydromulch seeds are acceptable for natural or undisturbed slopes. Hydromulch seeds should be applied following the first measurable rainfall in the fall of the year or a temporary irrigation method shall be provided to ensure germination and minimum growth. If the natural rainfall fails to provide adequate moisture for germination, supplemental irrigation and replanting may be required.

   An organic mulch at least two inches deep is an acceptable alternative to groundcover between shrubs and on non-slope areas. Whenever feasible, the origin of this mulch material shall be recycled yard trimmings and other organic wastes of local origin.

8. **Manufactured Slopes - Erosion Control:** Manufactured (man-made) slopes shall be planted and irrigated per the following standards: (Netting is required on slopes steeper than 2:1):

   a. **Groundcover:** Manufactured slopes shall be planted with groundcover materials for erosion control. Groundcover may be applied as a hydromulch or planted from rooted cuttings (See Section 7- Groundcover). All slopes must comply with Uniform Building Code as adopted by the Ventura County Public Works Agency.

   b. **Trees and Shrubs:** Manufactured slopes shall have a mixture of trees and shrubs incorporated with groundcover to assure soil stabilization and to promote varying height and mass of landscaping. However, within the private portions of single-family lots, sloped areas which are less than eight (8) feet in height are not required to be planted with shrubs, and sloped areas less than five (5) feet in height are not required to be planted with trees.

      There shall be a minimum of one (1) tree for every 500 square feet of slope area. If permanent groundcover is applied as a hydromulch, there shall be a minimum of one (1) shrub for every 125 square feet of slope area. If rooted cuttings are utilized as groundcover, there shall be one (1) shrub for every 300 square feet of slope area. There should be a mix of one (1) gallon to fifteen (15) gallon trees and shrubs to promote varying height and mass of landscaping. Box sized trees require retaining walls on slopes to prevent slope failure.

c. **Slope Irrigation**: Soil type and percolation rate shall be considered when designing slope irrigation. Properly designed and installed sprinklers are required to conserve water and promote slope stability. Slopes less than three (3) feet high may be irrigated by hose bibs located not more than fifty (50) feet from the area to be irrigated. Slopes over three (3) feet in height shall have an approved, permanently installed irrigation system.

9. **Water Features:** Recirculating water shall be used for decorative water features. Functional water features (such as swimming pools) shall be allowed provided that they are essential to the project. Water features shall be included in the planting area calculation and considered as a high water use zone.

10. **Irrigation System Standards:** The irrigation design shall provide adequate "head-to-head" or rootball coverage and sufficient water for the continued healthy growth of all proposed plantings with a minimum of waste or overspray on adjoining areas. The irrigation system shall deliver water efficiently and uniformly. The distribution uniformity of an installed sprinkler system shall meet or exceed 70 percent. Automatic irrigation controllers are required with separate programs for different irrigation needs. Soil moisture sensing devices are suggested in representative areas of the landscape plan. Drip emitters, soakers and bubblers are recommended for trees and shrubs. Sprinkler heads should be properly located to minimize landscape water overspray onto unplanted areas or areas of dissimilar water needs. Quick couplers or hose bibs are required 100 feet apart throughout the project.

    Specific site conditions and proposed landscape materials will determine the design of the irrigation system. Further, when considering design alternatives, the following criteria shall be utilized:

    a. **Valves and Circuits:** Landscape materials which have different watering needs (hydrozones) shall be irrigated by separate control valves and circuits (examples: full sun/full shade, level areas/sloped areas, shrubs/lawn/street trees, etc.). If one control valve and circuit is used for a given area, only landscape material with similar watering needs shall be used in that area. Anti-drain (check) valves shall be installed at strategic points to minimize or prevent low-spot drainage, runoff, and subsequent erosion from low elevation sprinkler heads.

    b. **Sprinkler Heads:** Sprinkler heads shall be selected for proper area coverage, precipitation rate, operating pressure, adjustment capability, and ease of maintenance. Heads or emitters shall have matched precipitation rates within 10% for each control valve circuit. Above ground risers are not allowed next to sidewalks, driveways or curbs and are discouraged anywhere accessible to people. These sprinklers must be pop-up type. In areas less than six feet wide, drip emitters and bubblers shall be used.

    c. **Rain Sensing Override Devices**: These are required on all irrigation systems.

    d. **Runoff and Overspray:** Soil types and percolation rate shall be considered when designing irrigation systems. All irrigation systems shall be designed to avoid runoff, low head drainage, overspray, or other similar conditions where

water flows onto adjacent areas, walks, roadways, or structures. The water application rate shall attempt to match the infiltration rate of the soil. Repeat cycles shall be utilized in an effort to avoid runoff.

e. Piping: Plastic (PVC) mainline piping requires placement not less than 18" below final grade, with lateral lines requiring 12" depth or UVR (Ultra Violet Resistant) above ground pipe. Galvanized lines shall be above ground. Other piping shall be considered for drip or temporary irrigation. Reclaimed water systems shall follow current County Health and State standards for depth and separation.

f. Controllers: Automatic sprinkler program controllers are required for each different irrigation need of the landscape. Controllers shall be capable of controlling the operating time for each circuit, the starting time and daily schedule of operation. Each controller must be able to accommodate multiple schedules and contain 14-day minimum clocks; percentage switches; repeat cycles; the ability to schedule by the day of the week; and rain sensing override devices. A watering schedule shall be placed in each controller (see Attachment 9).

g. Water Meters: Landscape irrigation systems shall be on a separate water meter unless waived by the Planning Director. A separate meter provides for monitoring of landscape irrigation efficiency.

h. Reclaimed Water: All projects shall install reclaimed water irrigation systems if reclaimed water is available and if installation is determined to be feasible and is approved by the Environmental Health Division in conjunction with the local water purveyor. If reclaimed water is not currently available, large scale projects such as golf courses, shall be evaluated for reclaimed water irrigation system installation. Consultation with the Environmental Health Division and local water purveyors regarding the feasibility of using reclaimed water shall be required of the applicant and a report detailing such consultation shall be provided to the Planning Director as part of the landscape package.

E. Water-Efficient Model Home Requirements

1. **General:** These requirements apply to all Residential Zones whenever models are involved. If there are two or more models, one shall be designed to meet the water-saving landscaping condition for residential tracts. Each "water-saving" model home shall contain exclusively low-water use plant materials and efficient irrigation systems with appropriate signs and information for prospective home buyers.
2. **Water Meter:** Each model in the complex, including the low-water use model, shall be equipped with a water meter to generate records on how much water the landscape uses. The information will be used in public information materials about the model and the water-saving potential for low-water use landscapes.
3. **Plant Materials**: All plants used are to be low-water using types and readily available in Ventura County or other nearby sources. The plants used should be attractive, including some flowering types, require relatively little maintenance once established, and enhance the appearance of the model.
4. **Use of Lawn**: The use of lawn is discouraged in the front yard. When there are two models, the use of lawn in the water-efficient model shall not exceed 15% of the net landscaped area with no limit on front yard use. When there are three or more models, the use of lawn shall be eliminated from the front yard with no more than 15% of the net landscaped area to be lawn in the backyard of a water-efficient model. The net landscaped area is the gross area minus the house foot print, the driveway, detached garage, attached covered patio, slopes of 3:1 or steeper than four feet high. Low-water use varieties of lawn shall be used.
5. **Irrigation System**: The irrigation system serving a low-water use landscape shall include a bubbler and/or drip system valve. Any sprinklers shall be located properly to minimize overspray onto unplanted areas. At least one moisture sensor should be used with a sign indicating its location. The moisture sensor will override the controller if the soil is too wet to require irrigation.
6. **Signs**: Signs identifying aspects of the landscape design and irrigation shall be placed around the model. These signs should be clearly marked on the landscape plan for the model. The criteria below should be used in developing and placing the signs.
    a. **Entrance Sign:** A sign, large enough to be visible from the street and sidewalk (at least 2 feet by 2 feet) shall be located in front of the model home. The sign shall indicate that the model is landscaped with low-water using or drought tolerant plant materials and that an efficient irrigation system has been used.
    b. **Other Exterior Signs**: Several signs shall be placed throughout the landscaped area identifying the irrigation system used, the different subareas of the landscape, and any other features that contribute to the overall water conservation theme (hardscapes, redwood bark, mulch). One sign indicating the use of a moisture sensor in the display should also be included.
    c. **Interior Signs or Displays:** A drawing or combination of drawings should be displayed inside the model providing a schematic of the landscape. These draw-

ings should include a key identifying the plants in the yard. It is suggested that this schematic also be printed in a one page handout to be available at the model or the sales office. The drawings could be simplified renderings of the landscape plan itself, using common names rather than the botanical names for the plants. The drawings should be colorful, easy to read, and framed for protection

7. **Literature**: A package of literature describing water conserving landscaping shall be given out to individuals upon purchase of a home in the tract. This literature and additional materials shall be displayed inside the model, also enclosed in a frame, with a note indicating where this material can be obtained. Literature to be given to home buyers at the time of purchase can be purchased from the Planning Division for the cost of the materials.

SIGN EXAMPLES

ENTRANCE

This Goodguy Development Company model home features a water-conserving landscape design and efficient irrigation system. Look for additional landscape descriptions on signs in the front and backyards and at the Sales Office. Inside the model home is a landscape plan of the yard to help you in

PLANTS

The plants used in this model are low-water using and drought tolerant. These plants do not require a lot of water and are grouped according to their water requirements and sun or shade tolerance.

TURF

The use of lawn in this landscape is minimized. The special low-water using variety of grass used is placed where it can be best used for recreation.

IRRIGATION SYSTEM

The irrigation system minimizes water use by grouping plants with similar water needs together on the same irrigation valve. Low application rate sprinklers and drip irrigation conserve water by reducing runoff. An automatic control system is used to apply water accurately and consistently. A moisture sensor connected to the automatic controller is placed in the lawn area to determine when water is needed.

NATIVE PLANTS

The plants used in this model are species native to Ventura County and California. They are adapted to the soil, climate and water conditions of the area. The plants are low-water using and provide habitat for native animals.

F. Approval/Installation Verification

1. **Approved Plans/Conditions**: Copies of the approved landscape plans and conditions are kept and available at Ventura County Planning Division, L# 1740, 800 South Victoria Avenue, Ventura, CA 93009.

2. **Landscape Condition Compliance Review:** Upon completion of the installation of the landscaping and prior to final inspection, the applicant's landscape consultant shall inspect the site and certify that the landscape complies with these guidelines. Certification shall be accomplished by completing the Certificate of Compliance checklist (Attachment 2). Concurrently or afterwards, the County's landscape consultant shall inspect the landscape planting and irrigation installations for conformance with the approved plans and specifications. A County-certified tester must also certify the backflow prevention device. A list of devices which are approved by Ventura County Environmental Health Division is available from that division.

   A second inspection of residential common areas and commercial or industrial projects shall be conducted by the County's landscape consultant one year after certification to assure condition compliance including irrigation efficiency and plant viability.

3. **Maintenance Program:** Landscapes of residential common areas and commercial or industrial projects shall be carefully and competently maintained to ensure water efficiency and high quality appearance. **Maintenance guideline notes must appear on the planting plan drawings.** A watering schedule encased in plastic shall be kept inside each controller (with reduced as-built plans showing hydrozones).

The following shall be shown on the Planting Plan:

Post-Installation Maintenance Guidelines

a. **Any alterations to the landscape must be approved** by Ventura County Resource Management Agency, Planning Division.

b. **Control all harmful diseases and pests.** All chemical applications must be per state licensed advisors and applications.

c. **Pruning shall be done to keep plants within spacial limitations**, removal of deadwood, cross-branching, etc., per International Society of Arboriculture standards (ISA). Plants shall never be sheared unless specified on the approved plan. Trees are to be allowed to grow to the designed size to provide maximum shading of paved areas.

d. **Water shall be applied for optimum plant growth** with minimal runoff or overspray.

e. **Adjust controllers per current California Irrigation Management Information System (CIMIS) Data:** 805/644-4921.

f. **Always replace heads with same kind or matching precipitation rate.**

g. **Backflow device shall be tested and certified annually** by the Ventura County Environmental Health Division.

h. **Inspect tree supports frequently** and remove as soon as plants will stand without support and will be able to resist wind damage. Never allow support materials to girdle trunk or branches.

i. **One year following final acceptance of residential common area and commercial or industrial project landscaping plans, the County will inspect for plant viability and water efficiency.**

j. **Landscape irrigation shall be scheduled during night or early morning hours.**

k. **A regular maintenance schedule** shall include checking, adjusting, and repairing the irrigation equipment; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning, weeding, and removing litter in all landscaped areas.

l. **Irrigation scheduling shall incorporate evapotranspiration data** from the California Irrigation Management Information System (CIMIS) weather stations to apply the appropriate levels of water to the different planting zones.

4. **Water Management Audit:** If a project is found to be operating over its water budget, a water audit will be required. Objective data such as water bills or metered gallonage will be required as proof of meeting the water budget.

   At the case planner's discretion, a water audit may be required at installation of the irrigation system prior to plant installation. In addition, one year following final acceptance of residential common areas and commercial or industrial project landscape plans, landscape irrigation audits shall be conducted by landscape irrigation auditors acceptable to Ventura County Planning Division. All water audits shall be catch cup field audits. Refer to the water audit manuals below for distribution uniformity factors and tolerance guidelines.

   A project exceeding its budget will have 60 days to come into compliance. The audit shall be in accordance with the California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook (Department of Water Resources June 1990 version 5.5) or the Handbook for Irrigation Evaluation and Scheduling (Metropolitan Water District and University of California Cooperative Extension) or other audit method acceptable to the Planning Director.

G. Enforcement

Failure by the applicant, successor in interest, or homeowner's association to maintain installed landscaping and efficient irrigation systems will constitute a violation of the Conditions of Approval and/or Mitigation Measures of the development permit. Before any action is instituted, the responsible party will be given an opportunity to resolve the complaint through an informal office hearing to negotiate a solution to the violation.

If the violation cannot be resolved, the Planning Director may, pursuant to Sections 8114-3 and 8183-5 of the Ventura County Ordinance Code, initiate further enforcement action.

Ventura County Landscape Design Criteria

Attachments

Attachments

Reimbursement Agreement for Landscape Plan Review

Permit/Entitlement Number(s): _____

I, the undersigned Applicant, hereby authorize the County of Ventura to review the Landscape Plans submitted for the above referenced permit/entitlement request(s) in accordance with the Ventura County Ordinance Code. I am herewith depositing $_____ in accordance with adopted fee schedule to cover staff review, coordination and processing costs based on real time expended. I understand that, if the final cost is less than the deposit fee, the unused portion of the deposit will be refunded to me. I further understand that, if the final cost is more than the deposit fee, I shall pay the balance due.

Name of Applicant*:_____
please print or type

Phone: (_____) _____

Address of Applicant: _____
(do not use P.O. Box)

Phone: (_____) _____

Name of Corporation or Agency: _____

Address of Corporation or Agency:_____
(do not use P.O. Box)

_____
Signature Date

**If corporation or agency, list person(s) authorized to act on behalf of corporation or agency.*

Attachment 1

Notes

Applicant's Landscape Consultant's Checklist and Certificate of Compliance

Project Number _____ Assessor's Parcel No.: _____

Landscape Contractor: _____

Landscape Architect: _____

Applicant: _____

I certify that:

Post-Installation Inspection: (check to indicate compliance)

- ❑ A. Plants installed as specified including proper staking & root control boxes
- ❑ B. Soils amended as noted in soils report (Invoices attached)
- ❑ C. Irrigation system installed as designed and adjusted
- ❑ D. Reduced as-built plans in controllers
- ❑ E. As-built plans provided to owner/manager
- ❑ F. Backflow Prevention Test

I certify that this project complies with the Ventura County Landscape Design Criteria. The landscape planting and irrigation installation conform with the approved plans and specifications with the following exceptions: (Itemize all exceptions on attached sheets)

_____ _____ _____

Signature, Applicant's Landscape Architect of Record | State License Number | Date

---

COUNTY OF VENTURA
Landscape Consultant Verification

I certify that this project :

- ❑ Complies,
- ❑ Does not comply, with the approved Landscape Plans with the following exceptions: (Use attached sheets, if necessary)

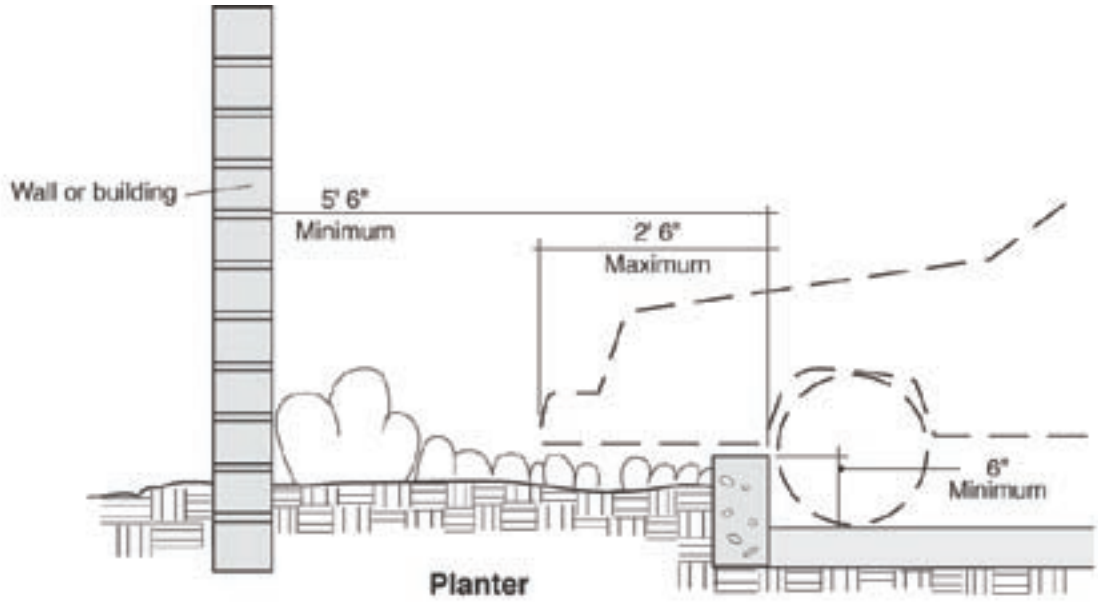
_____ _____ _____

Signature, County's Consultant | State License Number | Date

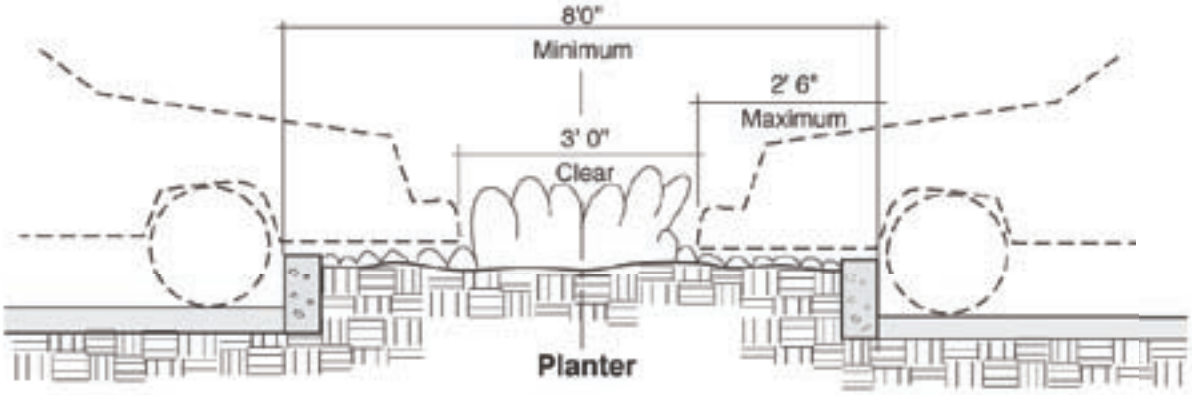
Attachment 2

Notes

Vehicle Overhang Detail



Single Vehicle Overhang

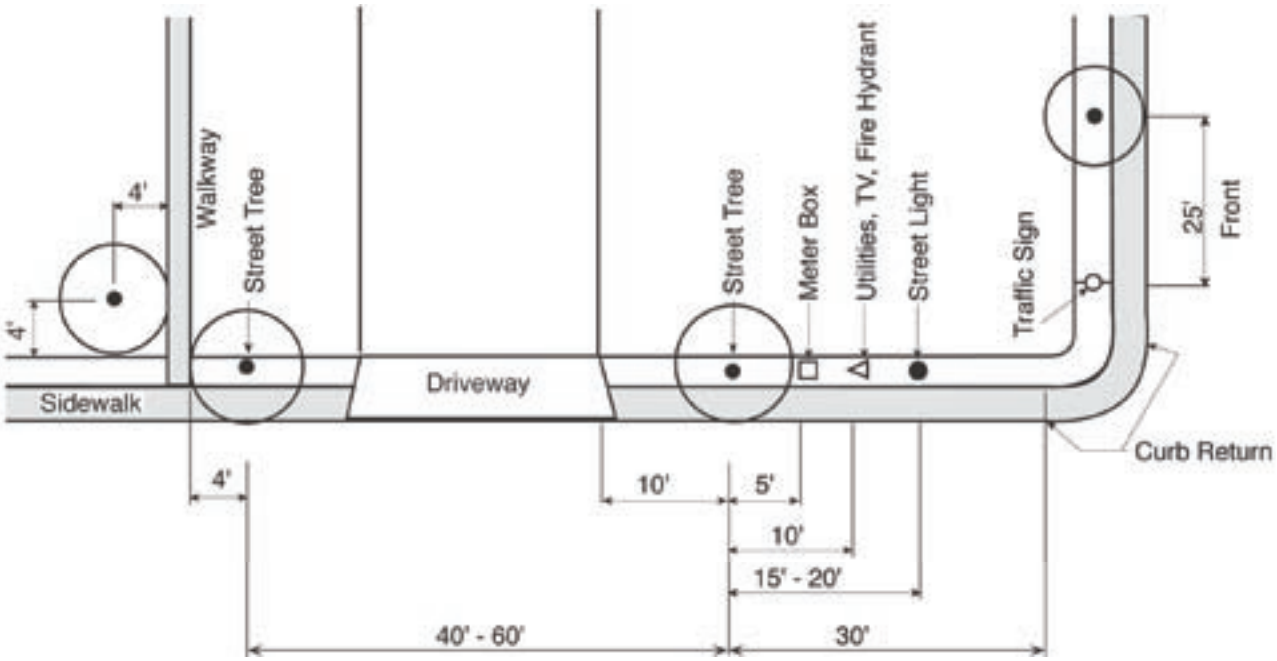


Double Vehicle Overhang

Attachment 3

Notes

Street Tree Placement

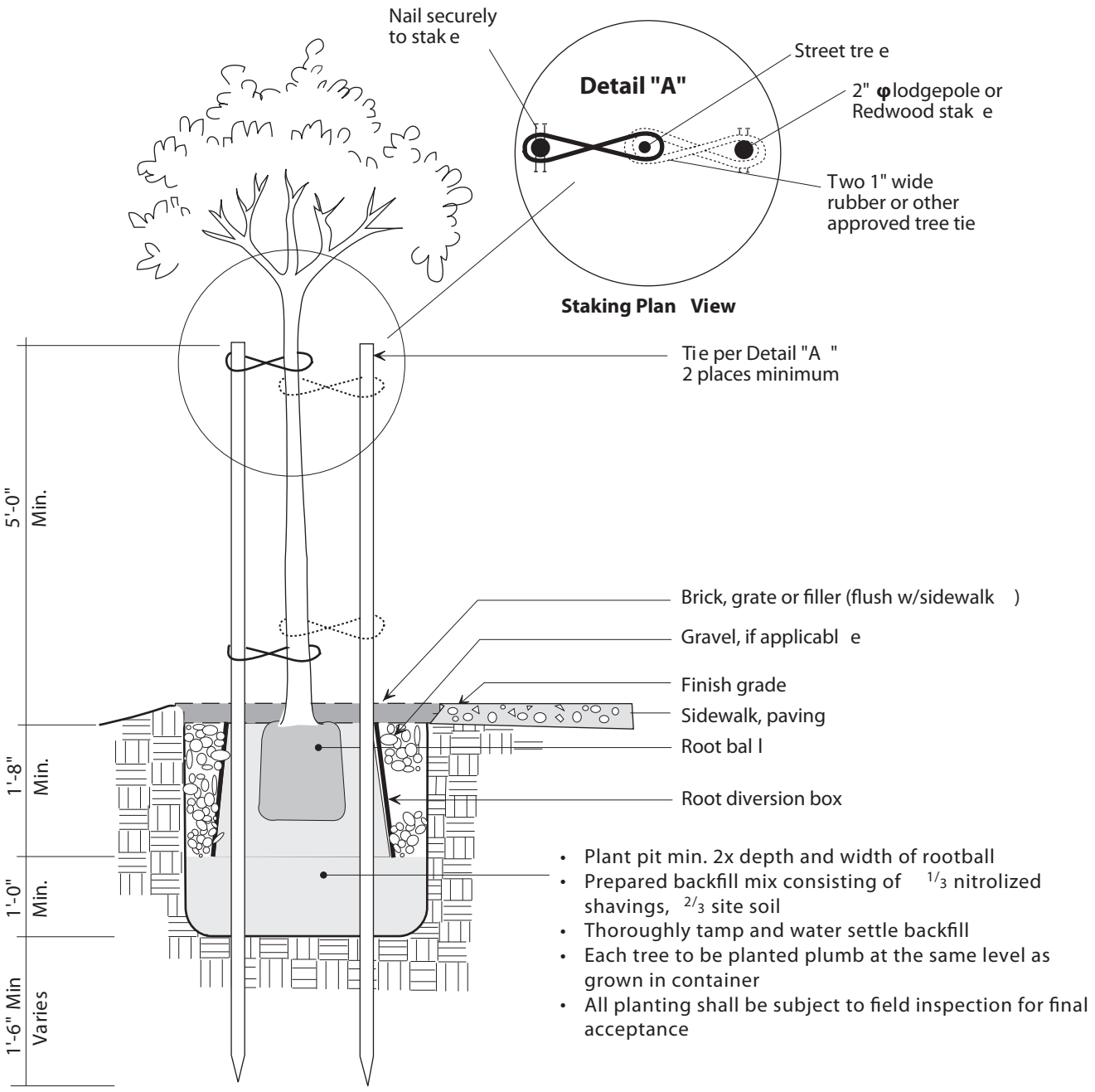


1. Exact locations of utilities, etc. shall be verified on site and subject to County inspection.
2. A minimum of one tree per interior lot and two per corner lot is required.
3. Trees eliminated by setback requirements shall be planted on the property to continue the streetscape theme.

Attachment 4a

Notes

Street Tree Planting and Staking Detail

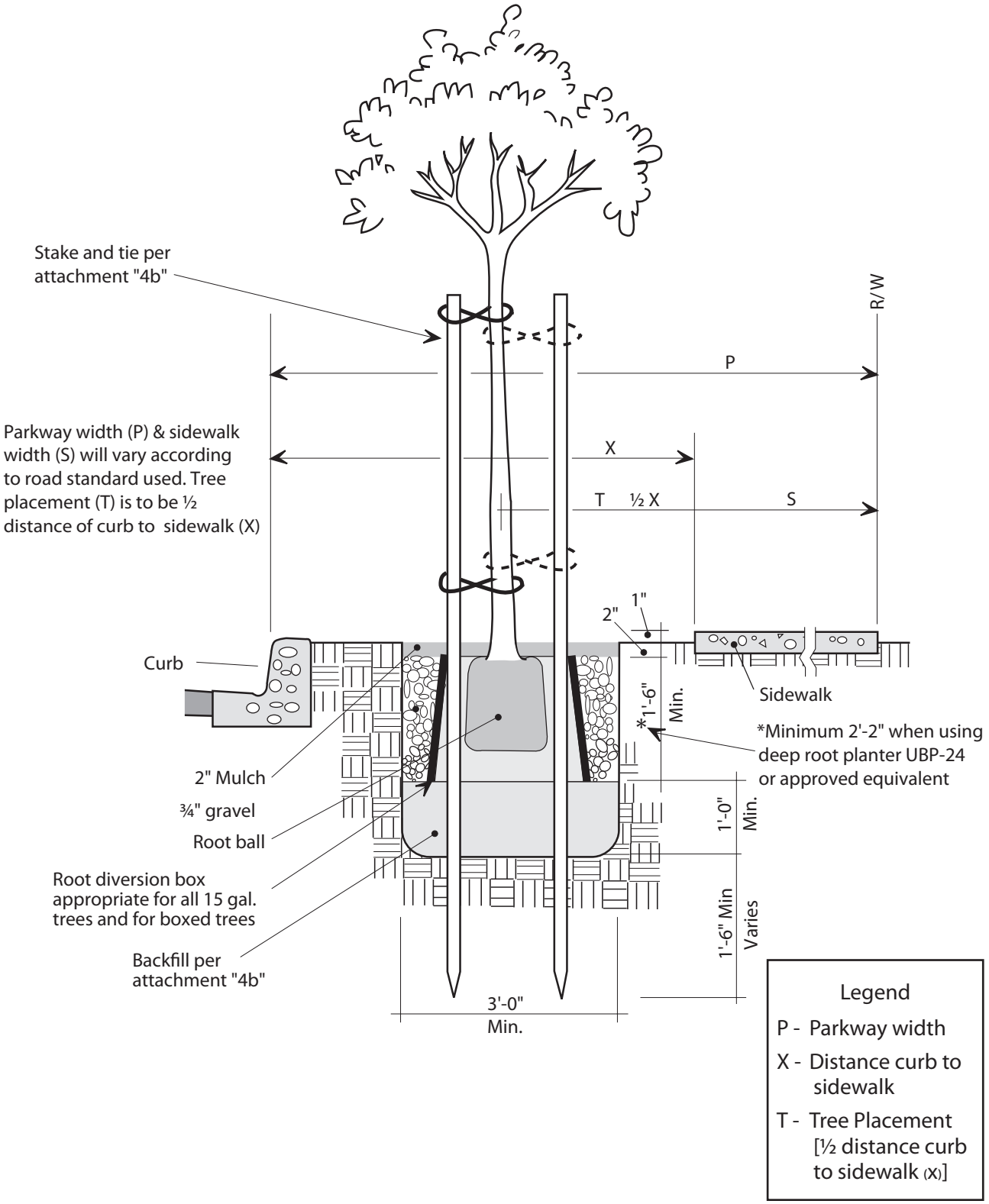


- Plant pit min. 2x depth and width of rootball
- Prepared backfill mix consisting of 1/3 nitrolized shavings, 2/3 site soil
- Thoroughly tamp and water settle backfill
- Each tree to be planted plumb at the same level as grown in container
- All planting shall be subject to field inspection for final acceptance

Attachment 4b

Notes

PARKWAY STREET TREE DETAIL



Attachment 4c

Notes

Recommended Street Trees

County of Ventura Public Works Agency

Botanical Name	Common Name	Parkway width or distance behind sidewalk			Remarks
		2-4'	4-6'	6'+	
Evergreen Broadleaf					
Acacia baileyana	Bailey Acacia		x	x	Alkaline sensitive
Acacia b. 'Purpurea'	Purple-leaf Acacia	x	x		Alkaline sensitive
Callistemon citrinus	Lemon Bottlebrush	x	x		Alkaline sensitive
Cinnamonum camphora	Camphor Tree			x	
Cupaniopsis anacardioides	Carrot Wood		x	x	Tolerates poorly drained soil; wind
Hymenosporum flavum	Sweetshade		x	x	Not in clay soils or coastal wind
Magnolia grandiflora	Southern Magnolia			x	Use a cultivar type-80 ft
Maytenus boaria	Mayten Tree		x	x	
Melaleuca leucadendra	Cajeput Tree		x	x	
Olmediella betschleriana	Guatemalan Holly			x	
Persea borbonia	Redbay		x	x	
Podocarpus gracilior	Fern Pine				
Quercus ilex	Holly Oak		x	x	Tolerates salt air & wind
Schinus terebinthifolius	Brazilian Pepper		x	x	
Tristania conferta	Brisbane Box		x	x	
Ulmus parvifolia	Evergreen Elm			x	"Drake" or "Brea" varieties
Deciduous - Flowering					
Bauhinia purpurea	Purple Orchid Tree		x	x	
Calodendrum capense	Cape Chestnut		x	x	Not for windy areas
Cassia excelsa	Crown of Gold Tree		x	x	
Gleditsia triacanthos 'Moraine'				x	Not for coast
Jacaranda acutifolia	Jacaranda		x	x	Young, tender at 25° not for beach
Koelreuteria paniculata	Goldenrain Tree		x	x	OK for wind & alkaline soil

Attachment 4d

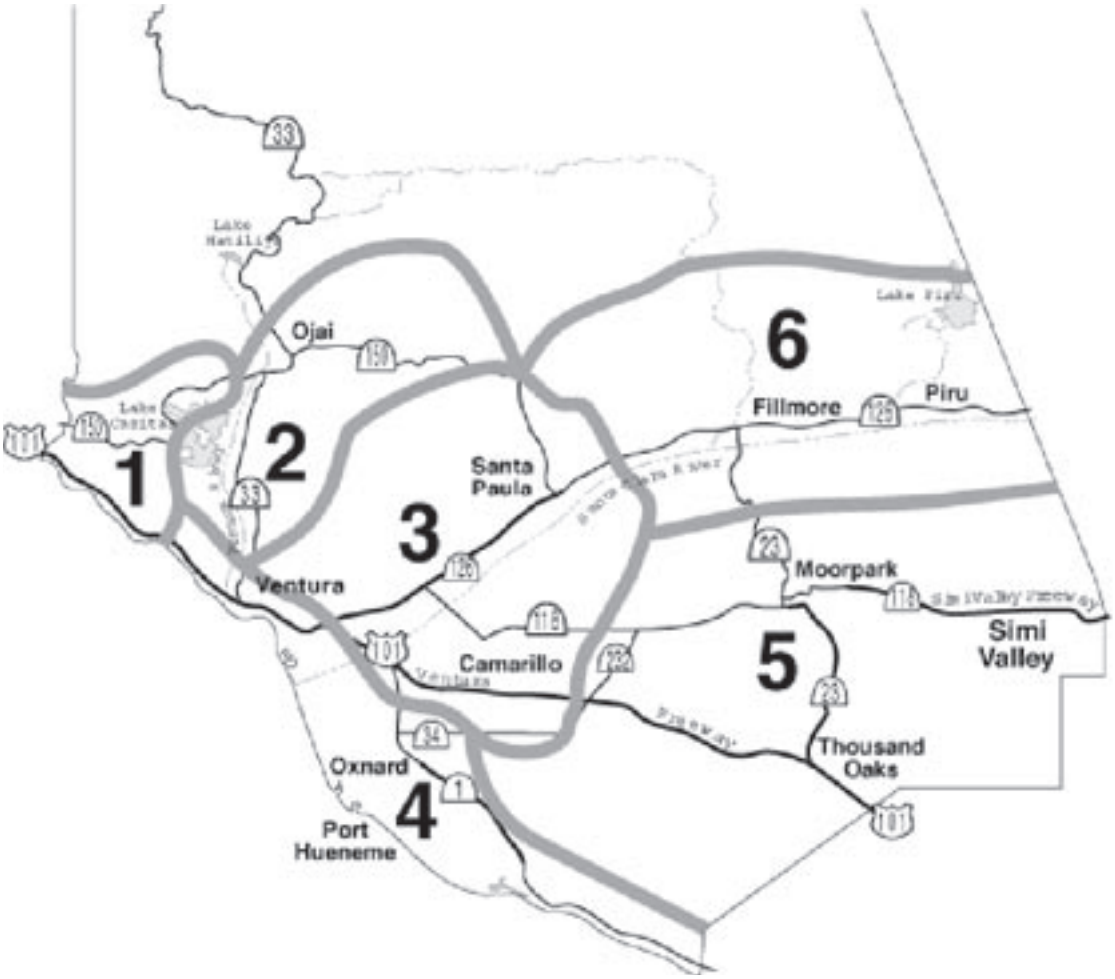
Recommended Street Trees (continued)

Botanical Name	Common Name	Parkway width or distance behind sidewalk			Remarks
		2-4'	4-6'	6'+	
Deciduous - Flowering (continued)					
Lagerstroemia indica x faueri	Hybrid Crape Myrtle	x	x	x	Not for fog belt, Alkaline sensitive
Liriodendron tulipifera	Tulip Tree	x	x		Alkaline sensitive; not for clay soil
Tipuana Tipu	Tipu Tree			x	Hardy to 25°, better away from beach
Deciduous - Foliage Color					
Ginkgo biloba	Maidenhair Tree			x	
Liquidambar styraciflua	American Sweet Gum			x	Not for windy areas
Pistacia chinensis	Chinese Pistache			x	
Prunus pissardii or blireiana	Purple Leaf Plum		x	x	Not for coast
Pyrus calleryana 'Aristocrat'	Aristocrat Pear		x	x	Young, tender at 25° not for beach

Note: Extreme climatic conditions exist within Ventura County. Each of the street trees must be researched for appropriateness for the particular area. Each of the micro-climates of the particular plant site and other existing vegetation should be researched. Other varieties may be recommended by a California Registered Landscape Architect.

Attachment 4d

Ventura County Weather Stations
Evapotranspiration Rates (ET)



Zone 1 - Rincon/Casitas Pass Area

Zone 2 - Ojai Valley Area

Zone 3 - East Ventura/West Santa Paula Areas

Zone 4 - CBC Base/Port Hueneme Area

Zone 5 - East County Area (Weather station available soon)

Zone 6 - Piru Spreading Grounds Area

The ET hotline number for Casitas Pass and Ojai Valley areas is 805/649-1643.

The ET hotline number for East Ventura/West Santa Paula, Piru and CBC Base/Coastal areas is 805/644-4921.

Call these numbers for current weekly ET from the California Irrigation Management System (CIMIS).

Note: This map will be updated in 1993 to reflect new weather stations.

Attachment 5

Inventory of Invasive Plants (California Invasive Plant Council)
March 2012

Scientific Name	Common Name
Acacia dealbata	Silver wattle
Acacia melanoxylon	Black acacia, blackwood acacia
Acroptilon repens	Russian knapweed
Aegilops triuncialis	Barb goatgrass
Ageratina adenophora	Croftonweed, eupatorium
Agrostis avenacea	Pacific bentgrass
Agrostis stolonifera	Creeping bentgrass
Ailanthus altissima	Tree-of-heaven
Alhagi maurorum	Camelthorn
Alternanthera philoxeroides	Alligator weed
Ammophila arenaria	European beachgrass
Anthoxanthum odoratum	Sweet vernalgrass
Arctotheca calendula (fertile)	Fertile capeweed
Arctotheca calendula (sterile)	Sterile capeweed (synonym of Arctotheca prostrata)
Arundo donax	Giant reed
Asparagus asparagoides	Bridal creeper
Asphodelus fistulosus	Onionweed
Atriplex semibaccata	Australian saltbush
Avena barbata	Slender wild oat
Avena fatua	Wild oat
Bassia hyssopifolia	Fivehook bassia
Bellardia trixago	Bellardia
Brachypodium distachyon	Annual false-brome, false brome, purple false broom, stiff brome
Brachypodium sylvaticum	Perennial false-brome
Brassica nigra	Black mustard
Brassica rapa	Birdsrape mustard, field mustard
Brassica tournefortii	Saharan mustard, African mustard
Briza maxima	Big quackingrass, rattlesnakegrass
Bromus diandrus	Ripgut brome
Bromus hordeaceus	Soft brome
Bromus japonicus	Japanese brome, Japanese chess
Bromus madritensis ssp. rubens	Red brome
Bromus tectorum	Downy brome, cheatgrass
Cakile maritima	European sea-rocket
Cardaria chalepensis	Lens-podded white-top
Cardaria draba	Hoary cress
Cardaria pubescens	Hairy whitetop
Carduus acanthoides	Plumeless thistle
Carduus nutans	Musk thistle
Carduus pycnocephalus	Italian thistle
Carduus tenuiflorus	Slenderflower thistle
Carpobrotus chilensis	Sea-fig, iceplant
Carpobrotus edulis	Hottentot-fig, iceplant

Attachment 6

Scientific Name	Common Name
Carthamus lanatus	Woolly distaff thistle
Centaurea calcitrapa	Purple starthistle
Centaurea debeauxii	Meadow knapweed
Centaurea diffusa	Diffuse knapweed
Centaurea maculosa	Spotted knapweed
Centaurea melitensis	Malta starthistle, tocalote
Centaurea solstitialis	Yellow starthistle
Centaurea virgata ssp. squarrosa	Squarrose knapweed
Chondrilla juncea	Rush skeletonweed
Chrysanthemum coronarium	Crown daisy
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Conicosia pugioniformis	Narrowleaf iceplant
Conium maculatum	Poison-hemlock
Cordyline australis	Giant dracaena, New Zealand cabbage tree
Cortaderia jubata	Jubatagrass
Cortaderia selloana	Pampasgrass
Cotoneaster franchetii	Orange cotoneaster
Cotoneaster lacteus	Parney's cotoneaster
Cotoneaster pannosus	Silverleaf cotoneaster
Cotula coronopifolia	Brassbuttons
Crataegus monogyna	Hawthorn
Crocosmia x crocosmiiflora	Montbretia
Crupina vulgaris	Common crupina, bearded creeper
Cynara cardunculus	Artichoke thistle
Cynodon dactylon	Bermudagrass
Cynoglossum officinale	Houndstongue
Cynosurus echinatus	Hedgehog dogtailgrass
Cytisus scoparius	Scotch broom
Cytisus striatus	Portuguese broom
Dactylis glomerata	Orchardgrass
Delairea odorata	Cape-ivy, German-ivy
Descurainia sophia	Flixweed, tansy mustard
Digitalis purpurea	Foxglove
Dipsacus fullonum	Common teasel
Dipsacus sativus	Fuller's teasel
Dittrichia graveolens	Stinkwort
Echium candicans	Pride-of-Madeira
Egeria densa	Brazilian egeria
Ehrharta calycina	Purple veldtgrass
Ehrharta erecta	Erect veldtgrass
Ehrharta longiflora	Long-flowered veldtgrass
Eichhornia crassipes	Water hyacinth
Elaeagnus angustifolia	Russian-olive
Emex spinosa	Spiny emex, devil's-thorn
Erechtites glomerata, E. minima	Australian fireweed, Australian burnweed
Erica lusitanica	Spanish heath,

Attachment 6

Scientific Name	Common Name
Erodium cicutarium	Redstem filaree
Eucalyptus camaldulensis	Red gum
Eucalyptus globulus	Tasmanian blue gum
Euphorbia esula	Leafy spurge
Euphorbia oblongata	Oblong spurge
Euphorbia terracina	Carnation spurge
Festuca arundinacea	Tall fescue
Ficus carica	Edible fig
Foeniculum vulgare	Fennel
Gazania linearis	gazania
Genista monspessulana	French broom
Geranium dissectum	Cutleaf geranium
Glyceria declinata	Waxy mannagrass
Halogeton glomeratus	Halogeton
Hedera helix, H. canariensis	English ivy, Algerian ivy
Helichrysum petiolare	Licoriceplant
Hirschfeldia incana	Shortpod mustard, summer mustard
Holcus lanatus	Common velvet grass
Hordeum marinum, H. murinum	Mediterranean barley, hare barley, wall barley
Hydrilla verticillata	Hydrilla
Hypericum canariense	Canary Island hypericum
Hypericum perforatum	Common St. John's wort, klamathweed
Hypochaeris glabra	Smooth catsear
Hypochaeris radicata	Rough catsear, hairy dandelion
Ilex aquifolium	English holly
Iris pseudacorus	Yellowflag iris
Isatis tinctoria	Dyer's woad
Kochia scoparia	Kochia
Lepidium latifolium	Perennial pepperweed, tall whitetop
Leucanthemum vulgare	Ox-eye daisy
Limnobium laevigatum	South American spongeplant,
Limonium ramosissimum ssp. provinciale	Algerian sea lavendar
Linaria genistifolia ssp. dalmatica	Dalmation toadflax
Linaria vulgaris	Yellow toadflax, butter and eggs
Lobularia maritima	Sweet alyssum
Lolium multiflorum	Italian ryegrass
Ludwigia hexapetala	Uruguay water-primrose
Ludwigia peploides ssp. montevidensis	Creeping water-primrose
Lythrum hyssopifolium	Hyssop loosestrife
Lythrum salicaria	Purple loosestrife
Marrubium vulgare	White horehound
Medicago polymorpha	California burclover
Mentha pulegium	Pennyroyal
Mesembryanthemum crystallinum	Crystalline iceplant
Myoporum laetum	Myoporum
Myosotis latifolia	Common forget-me-not
Myriophyllum aquaticum	Parrotfeather

Attachment 6

Scientific Name	Common Name
Myriophyllum spicatum	Eurasian watermilfoil
Nicotiana glauca	Tree tobacco
Olea europaea	Olive
Ononis alopecuroides	Foxtail restharrow
Onopordum acanthium	Scotch thistle
Oxalis pes-caprae	Bermuda buttercup, buttercup oxalis, yellow oxalis
Parentucellia viscosa	Yellow glandweed, sticky parentucellia
Pennisetum clandestinum	Kikuyugrass
Pennisetum setaceum	Crimson fountaingrass
Phalaris aquatica	Hardinggrass
Phoenix canariensis	Canary Island date palm
Phytolacca americana	Common pokeweed
Picris echioides	Bristly oxtongue
Piptatherum miliaceum	Smilograss
Plantago lanceolata	Buckhorn plantain, English plantain
Poa pratensis	Kentucky bluegrass
Polygonum cuspidatum	Japanese knotweed
Polygonum sachalinense	Sakhalin knotweed
Polypogon monspeliensis and subspp.	Rabbitfoot polypogon, annual beardgrass
Potamogeton crispus	Curlyleaf pondweed
Prunus cerasifera	Cherry plum
Pyracantha angustifolia, P. crenulata, P. coccinea	Pyracantha, firethorn
Ranunculus repens	Creeping buttercup
Raphanus sativus	Radish
Retama monosperma	Bridal broom
Ricinus communis	Castorbean
Robinia pseudoacacia	Black locust
Rubus armeniacus	Himalaya blackberry
Rumex acetosella	Red sorrel, sheep sorrel
Rumex crispus	Curly dock
Rytidosperma pencillatum	hairy oat grass
Saccharum ravennae	Ravennagrass
Salsola paulsenii	Barbwire Russian-thistle
Salsola soda	Oppositeleaf Russian thistle
Salsola tragus	Russian-thistle
Salvia aethiopis	Mediterranean sage
Salvinia molesta	Giant salvinia
Sapium sebiferum	Chinese tallowtree
Saponaria officinalis	Bouncingbet
Schinus molle	Peruvian peppertree
Schinus terebinthifolius	Brazilian peppertree
Schismus arabicus, Schismus barbatus	Mediterraneangrass
Senecio jacobaea	Tansy ragwort
Sesbania punicea	Red sesbania, scarlet wisteria
Silybum marianum	Blessed milkthistle
Sinapis arvensis	Wild mustard, charlock
Sisymbrium irio	London rocket

Attachment 6

Scientific Name	Common Name
Spartina alterniflora (and S. alterniflora x foliosa hybrids)	Smooth cordgrass and hybrids, Atlantic cordgrass
Spartina anglica	Common cordgrass
Spartina densiflora	Dense-flowered cordgrass
Spartina patens	Saltmeadow cord grass
Spartium junceum	Spanish broom
Stipa capensis	Mediterranean steppegrass,twisted-awned speargrass
Stipa manicata	tropical needlegrass
Taeniatherum caput-medusae	Medusahead
Tamarix aphylla	Athel tamarisk
Tamarix parviflora	Smallflower tamarisk
Tamarix ramosissima	Saltcedar, tamarisk
Tanacetum vulgare	Common tansy
Tetragonia tetragonioides	New Zealand spinach
Torilis arvensis	Hedgeparsley
Trifolium hirtum	Rose clover
Ulex europaeus	Gorse
Undaria pinnatifida	Wakame
Verbascum thapsus	Common mullein,woolly mullein
Vinca major	Big periwinkle
Vulpia myuros	Rattail fescue
Washingtonia robusta	Mexican fan palm
Watsonia meriana	Bulbil watsonia
Zantedeschia aethiopica	Calla lily
Zostera japonica	dwarf eelgrass

Attachment 6

Case Planner's Submittal Checklist

Ventura County Landscape Package

Project: _____

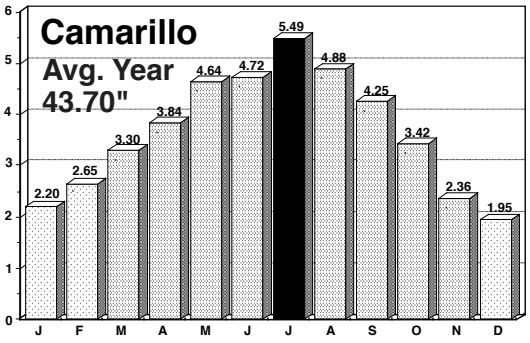
Applicant: _____

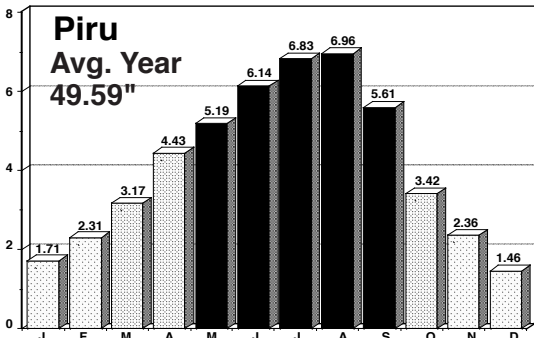
	Required	Submitted
Plan Check Fee in accordance with adopted fee schedule (Includes 1 year audit)		
Reimbursement Agreement (See Attachment 1)		
Planting Plan		
Hydrozone Map		
Irrigation Plan		
Surety Bond for Plant Viability or Installation		
Water Budget & Projected Water Use Calculations		
Written Specifications		
Applicable Details		
Soil Test/Preparation		
Maintenance & Water Schedules		
Required Related Material:		
Development Site Plan		
Achitectural Elevations		
Grading Plan		

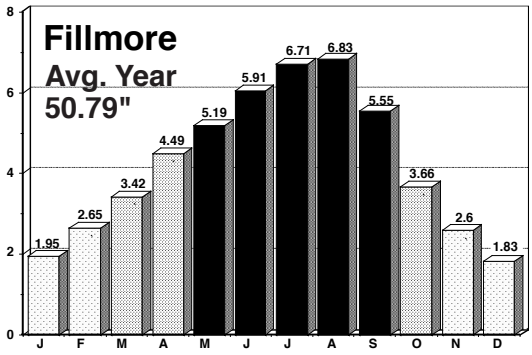
Attachment 7

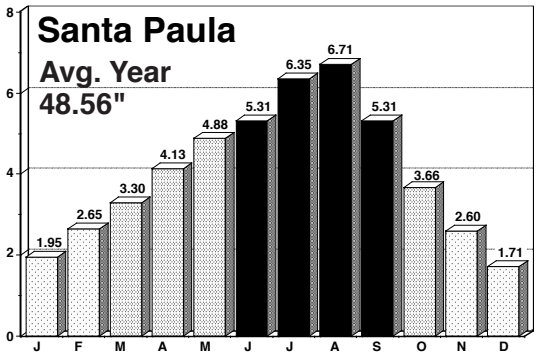
Notes

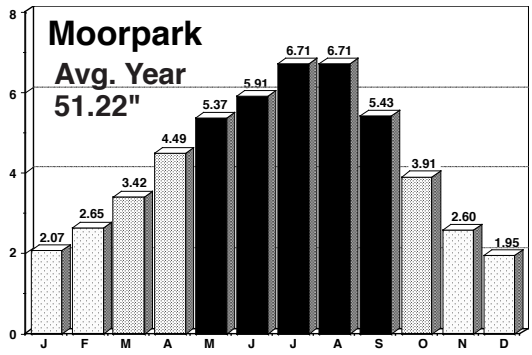
AVERAGE MONTHLY ETo IN VENTURA COUNTY

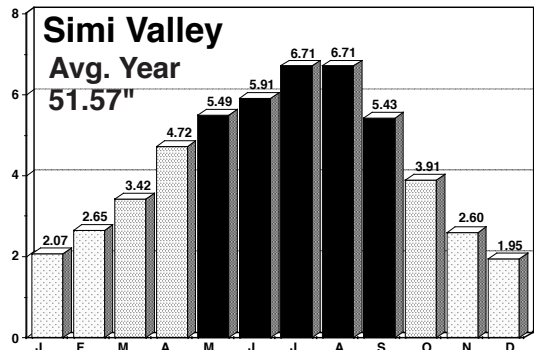


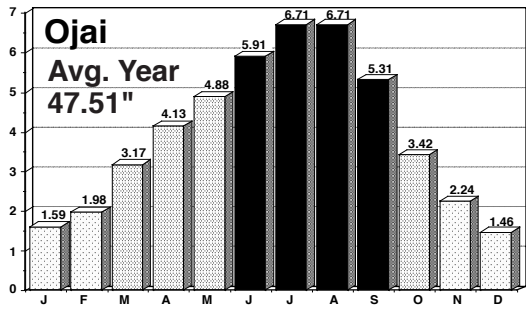


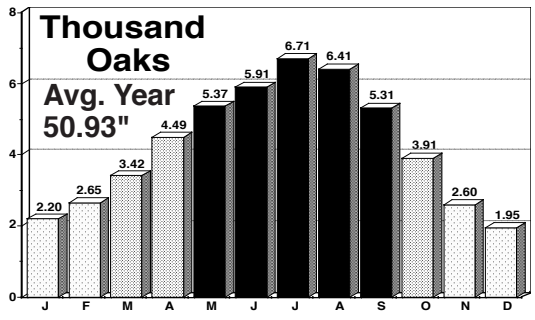


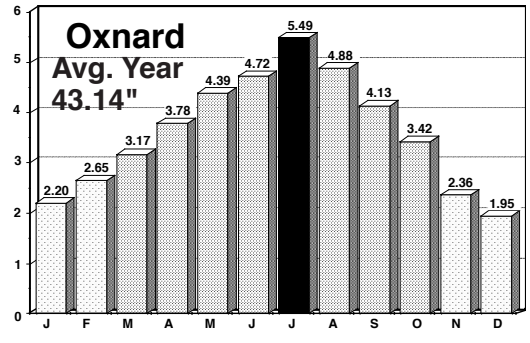


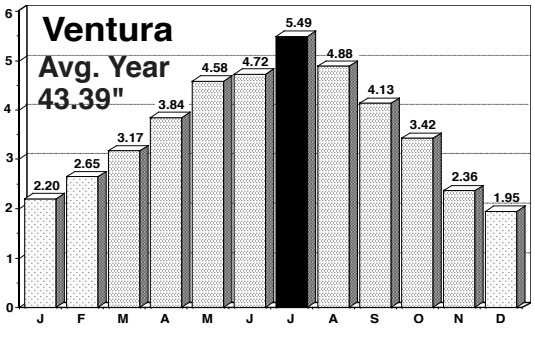












Attachment 8

Notes

Irrigation Run Time Calculation Formula

Flow Rate (FR): = GPM x # Heads

Sample: 15 GPM x 5 Heads = 75 Gallons/Minute

Precipitation Rate (PR): $\frac{PR = (96.3)\ (FR)}{\text{Hydrozone}}$

Sample: $\frac{(96.3) \times 75\ GPM}{5{,}000\ Sq.\ Ft.} = 1.45$ Inches/Hour

Run Time: (for January in Thousand Oaks)

$$\frac{(\text{ET day} \div \text{Day /Month}) \times (\text{Plant Factor}) \times (7\ \text{days/wk}) \times (60\ \text{min/hr})}{(\text{Irrigation Days/Wk}) \times (\text{Distribution Uniformity } .7) \times (\text{PR})}$$

Sample: (Using .8 Plant Factor)

$$\frac{[(2.2 \div 31) \times .8 \times 7 \times 60]}{3 \times .7 \times 1.45} = \frac{(.07) \times .8 \times 7 \times 60 = 23.5}{3.05} = \frac{7.7}{3.05} = 8 \text{ minutes}$$

Amount of Water Plants Will Receive Per Year:

Estimated Applied Water Use From Irrigation (EAWUFI) (per hydrozone):

EAWUFI = Run Time/60 x Irrigation Days x 52 wks/yr x PR x Hydrozone Area x .62

Sample: [(15.5 ÷ 60) x 3 x 52 x 1.45 x 5000 x .62] = 180,914 Gallons/Year/Hydrozone

Amount of Water Plants Need Per Year:

Estimated Total Water Use of Plants (per hydrozone):

$$\frac{\text{ET/year x Plant Factor x Hydrozone Area x .62 Conversion to gallons}}{\text{Irrigation Efficiency (Minimum .625)}}$$

Sample: 51 x .8 x 5000 x .62 = 202,368 gallons/year

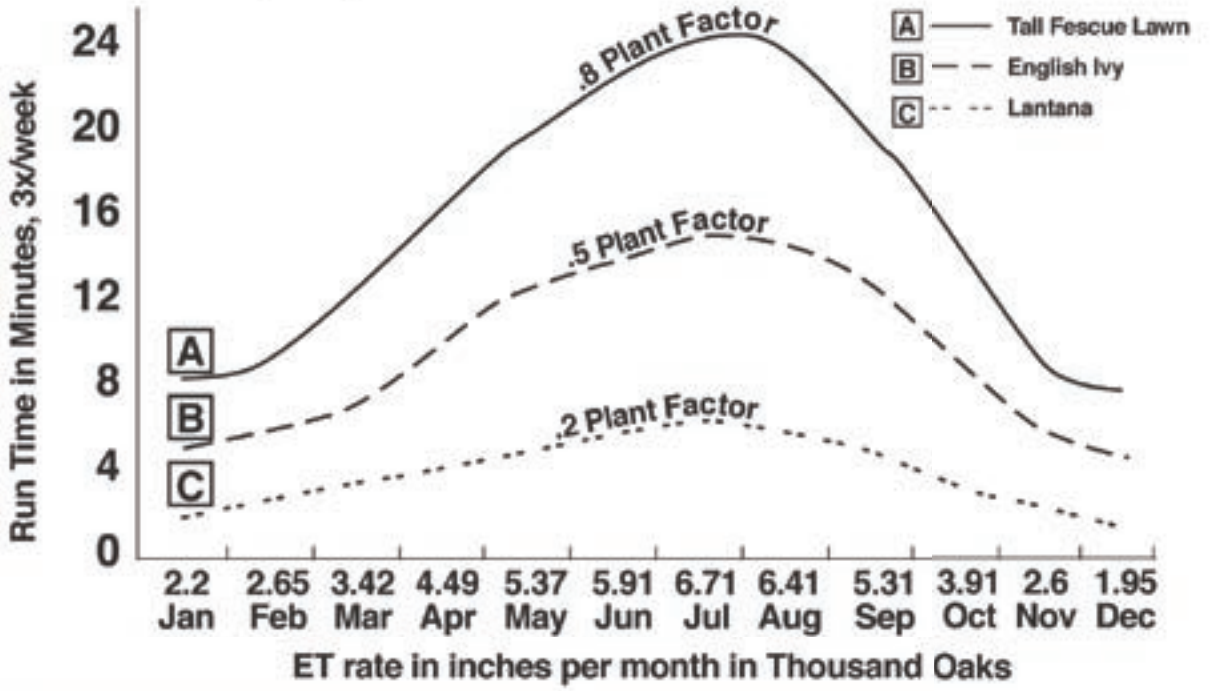
Shortfall: 202,368 – 181,148 (EAWUFI) = 21,454 shortfall to be made up by rainfall (10% shortfall)

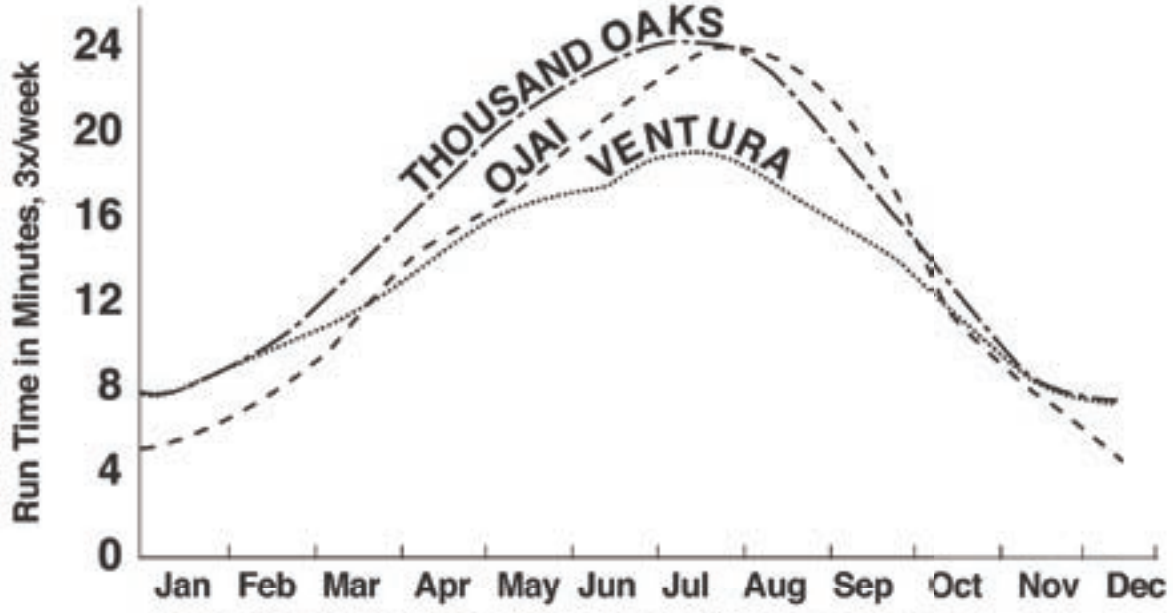
Note: The hydrozone calculations correspond to the .8 hydrozone on page 8 of the Landscape Design Criteria.

Attachment 9a

Notes

The first schedule will meet the water budget shown on page 8 for three plant types in Thousand Oaks using the same precipation rates (1.45) at one head per 5,000 square feet at 15 gallons per minute.





The schedule shows run times in three Ventura County cities for the same plant (turf grass-.8 plant factor). All factors are equal.

Attachment 9b

WUCOLS PROJECT

Water Use Classification of Landscape Species

available on line at
http://www.waterright.org/site2/publications/index.asp