SECTION 32 90 00
PLANTING
Design Standard

PART 1 GENERAL

1.1 PURPOSE:

A. San Mateo County Community College District is committed to providing world-class educational facilities for its faculty, staff and students. This goal would be unfulfilled without emphasizing that the exterior environment is part and parcel to the educational experience. The campus exterior is not just the space left over between the buildings nor is it simply the void between the buildings and the parking lots. The design of the entire campus experience must be thoughtfully considered to achieve this goal.

B. Planting on SMCCCD campuses is an important exterior design element used to define and delineate the hierarchy of spaces and paths, and to convey the identity of the campus. (Individual campus identities are described in the Exterior Design Standard for each campus.) Planting is also an important component of each campus's sustainability plan, which calls for the use of native and drought tolerant plants that are primarily low water-use.

C. San Mateo County Community College District is strongly committed to promoting sustainability throughout their campus projects. Section 01 81 13 Sustainability of the Design Standard provides guidelines and recommendations for implementing sustainability strategies. Where relevant, specific sustainability criteria is noted in this section; however, each project team should review and cross reference that front section while developing the specific project and its documentation. Each discipline shall confirm that specific performance and manufacturer information provided in the specification section is in alignment with code requirements, LEED criteria, and any other goals for sustainability.

PART 2 DESIGN STANDARD

2.1 PLANTING ZONES

A. In order to focus water and maintenance resources, the District has identified planting zones with associated maintenance and water demands. Each campus has four general planting zones: Undeveloped Areas; Perimeter Areas; Campus Core; and Specialty Areas. The District Project Manager will advise the design team as to the planting zone(s) applicable to each project.

1. Undeveloped Areas serve as buffers between the campus and adjacent neighborhoods, as well as animal habitat, and often are on steep slopes. Any new planting required in these areas should utilize native plants that are fire resistant and require no irrigation after establishment. Preventive maintenance for fuel reduction and other fire safe practices may be required.

2. Perimeter Areas include parking lots, athletic facilities, facilities maintenance centers, and any areas that campus users travel through but typically do not linger in. Planting in these areas should employ native and adapted, drought-tolerant plants that are low water-use and low maintenance. Particularly in parking lots, plant selections should be hardy and resilient.

3. Campus Core: Each campus has a core area that services as a focal area for academic buildings and campus activities. Planting in these areas should employ native and adapted, drought-tolerant plants that may be low to moderate water-use, and require moderate to regular maintenance.

4. Specialty Areas are campus entry and arrival areas, as well as gardens and courtyards specific to buildings. Criteria for planting design in these areas are established on a per-project basis, based on the programs and user groups identified for the space. Effort should be made to keep water use and maintenance requirements consistent with Campus Core areas, while meeting programmatic and design objectives.

2.2 PLANTING SELECTION AND DESIGN

A. The following outline the District's preferences. The design team should ensure these issues are reviewed with District Project Manager as the landscape design is developed and documented.

1. Safety and Security: Trees and plants should be located and maintained to allow clear visibility for safety and security, particularly at night.

2. Aesthetics: Plant and tree selections should look their best throughout the academic year. Select plants for their color, texture, and seasonal change. In Specialty Areas, consider plants that relate to the building's academic program. Refer to each campus's Exterior Design Standards for approved plant lists.

3. Sustainability:

a. Planting and irrigation design at all campuses should meet the requirements of LEED-NC WEc1.1, the Cal Green Building Code, and the state's model Water Efficient Landscape Ordinance. Refer to 32 84 00 Irrigation Design Standard for additional information.

b. Site and planting design should meet the requirements of LEED-NC SSc5.1.

4. Species Selection: Preference should be given to native species first and then adapted, drought-tolerant species. In Campus Core and Specialty Areas, moderate water-use plants may be considered on a per-project basis. When possible, use locally sourced plants.

5. Integrated Pest Management: SMCCCD's groundskeepers are committed to an integrated and natural pest management philosophy, with minimal chemical use. Good planting design will consider the animals (e.g. deer, rodents) that inhabit the campus, and include plant species appropriate to these existing conditions. For example:

a. Selection of planting materials that are naturally not attractive to the deer and rodent population.

b. Selection of planting material that does not encourage and/or create environments that support undesirable rodents.

c. Selection of planting material that avoids the pitfalls of messy fruiting trees (e.g. olives and female ginkgo trees) that require timed pruning or chemical application activities to prevent the messy fruits from developing.

6. Maintenance Requirements: The District prefers to focus landscape maintenance efforts on Campus Core and Specialty areas. Planting selections should be made accordingly.

7. Utilities: Information about the location of utilities on campus is available through the District's Landmark mapping program. Be aware of utilities and other infrastructure on

site. Locate trees away from utility lines. Plant selection and spacing should allow access to vaults, drains, and other at-grade infrastructure.

8. Turf Lawn: As part of their sustainability efforts, the District prefers to reduce the use of water- and maintenance-intensive turf lawns, particularly outside of Campus Core areas. Consider instead the planting of drought tolerant groundcovers that are aesthetically similar to lawn but require less water and maintenance. Where turf is used:

    a. Provide concrete mowbands between turf lawn and planting areas. New mowbands should match design of existing mowbands on each campus.

    b. Avoid tiny and geographically separate lawn areas that require frequent mowing, edging, and travel time from one area to the next with multiple pieces of maintenance equipment.

    c. Avoid inclusion of lawn areas that are too steep to safely operate a riding or push lawn mower.

9. Existing Turf Lawn: Where project areas include existing turf lawn, consult with District Project Manager to determine whether the lawn is a “legacy” area that should remain as turf or whether it should be replaced with drought tolerant planting.

10. No-Mow Fescues have had varying success on SMCCCD campuses. Based on these experiences, Canada and CSM campuses prefer not to have any new no-mow fescue plantings. Skyline accepts judicious and appropriate use of no-mow fescue plantings.

11. Existing Trees: District Project Manager will advise the design team as to significant, existing trees that should be maintained in the design of each project. Avoid disruption of and significant changes to existing grades and irrigation applications within an existing tree’s dripline. Tree protection measures should be taken during construction, per 31 10 01 Plant Protection.

12. Tree Selection: Avoid fruiting or otherwise messy species, trees that are brittle or susceptible to breakage in high winds, and trees with shallow rooting habits. Select appropriate plants to be located under the tree, based on water- and shade-requirements.

13. Tree Installation:

    a. Tree planting pits should be square and sized a minimum width of three times the rootball size, to ensure tree establishment. However, whenever feasible, a larger amended soil volume is recommended and preferred due to poor soil quality on SMCCCD campuses. For trees with a mature canopy size of 12 feet across or larger, the recommended minimum planting pit size is 12 feet square. Consult with the District Project Manager for direction.

    b. Trees in 48” box or larger should be guyed; all other trees to be staked per 32 90 00 Planting Specification.

14. Trees in Turf Lawn: Competition between turf and tree roots retards tree establishment and growth. Higher level of irrigation required by turf may not be compatible with the tree’s irrigation requirements. Tree root rot damage is a major concern for many of the native and inherently drought tolerant tree species in California. Where new trees are planted in turf, maintain a turf-free zone around the tree at least one half the diameter of the tree’s anticipated canopy size. (Campus groundskeepers will enlarge the opening as the tree grows.)

15. Hydroseeding for Erosion Control: Erosion control hydroseed mix should consist of native grasses. Under no circumstances should the seed mix include wildflowers.

16. Root Barriers: Provide root barriers where trees are located within 8’ of curbs, edge of paving, building foundations, and utility lines. Refer to 32 90 00 Planting Specification.

17. Soil Design: Specifications should require Contractors to strip and store existing topsoil for reuse in landscape installation and to provide laboratory analysis of existing topsoil for adjustment of amendments. Refer to Refer to 32 90 00 Planting Specification.

18. Mulch: Mulch selection should be reviewed with the District Project Manager. On slopes exceeding 3:1, utilize shredded bark mulch, which is less likely to be displaced in heavy rain events. Use rock mulch in swales and other areas that may experience heavy water flow in rain events.

2.3 SPECIFICATION SIZES

A. Trees should be specified in 24” minimum box sizes. Trees near structures should be located such that form may be maintained into maturity and excessive pruning will not be required.

B. Shrubs, perennials, ornamental grasses and vines should be specified in 1-gallon or 5-gallon containers. Ground covers should be specified in 1-gallon containers whenever possible and appropriate.

2.4 PLANTING DENSITY

A. In Undeveloped Areas, plant should be arranged to imitate naturally-occurring vegetation patterns; avoid formal arrangements.

B. In Perimeter and Parking Areas, plants should be spaced to facilitate ease of maintenance.

C. In Campus Core and Specialty Areas, plants may be spaced more densely to achieve a more immediate, lush effect.

2.5 MAINTENANCE

A. As part of specifications, contracts shall include a 90-day minimum maintenance period for planting and irrigation projects.

2.6 APPROVED MANUFACTURERS

A. Not Applicable

PART 3 EXECUTION

3.1 SUBSTITUTIONS

A. These District Standards have been approved by SMCCCD as Guidelines. Any deviation from the Standard must be approved by the District Project Manager.

3.2 ASSOCIATED DESIGN STANDARDS AND CONSTRUCTION SPECIFICATIONS

31 10 01 Plant Protection Construction Specification

32 90 00 Planting Construction Specifications

32 90 00 Planting Construction Details

32 84 00 Irrigation Design Standard

32 84 00 Irrigation Construction Specifications

32 84 00 Irrigation Construction Details

32 00 00 Cañada College Campus Exterior Design Standard

32 00 00 College of San Mateo Campus Exterior Design Standard

32 00 00 Skyline College Campus Exterior Design Standard

01 81 13 Sustainability Design Standard

3.3 ASSOCIATED STANDARD DETAILS

A. Tree Planting

B. Tree Staking

C. Tree Guying

D. Plant Spacing

E. Typical Planting

F. Planting on Slope

G. Vine Planting

H. Turf Planting

I. Root Barrier

J. Landscape Header – Metal

K. Landscape Header – Plastic

L. Landscape Header – Wood

END OF SECTION