The Saint Mary’s College campus, designed by renowned architect John Donovan, is indeed a special place. The College values its heritage and has worked diligently in past decades to preserve and advance the special qualities of the campus and its architecture.
“Many students and parents make their admissions decision the moment they turn up Saint Mary’s Parkway and see the Chapel and campus architecture for the first time.”

- Saint Mary’s College Brother
Introduction

In the 1700s the architectural traditions of Spain and southern Europe found a natural fit with the climate and weather of California, and the fusion of Spanish architecture with Native American building technology produced a style of building that continues to influence design in California and beyond. The thick adobe walls of the original Spanish Colonial structures helped to cool buildings on warm days and acted as heat sinks to warm buildings during cool nights. Deep-set windows provided sun control. Arcades both defined courtyard spaces and created comfortable shaded zones for activities and circulation.

Long before “sustainability” was an articulated construction goal, John Donovan was aware of these benefits when he designed the first buildings for the Moraga campus in the Spanish Colonial style. Beyond buildings, Mr. Donovan and the College also oversaw plans for a new and nearly self-sufficient infrastructure at the new campus, creating a power plant, water and sewage treatment system. Today, the College collaborates with the Town and local utilities to reduce energy consumption, conserve water, and retain stormwater within the property boundaries.

In accordance with the College’s mission, future campus improvements shall incorporate sustainable design and construction practices as required to meet the current California Green Standards Building Code (CGSBC) and local ordinances. In addition, projects strive to incorporate feasible sustainability measures, especially those which will reduce water and energy consumption.

The College subscribes to the Association for the Advancement of Sustainability in Higher Education (AASHE) STARS® (Sustainability Tracking, Assessment & Rating System) program. STARS, a comprehensive metric for higher education institutions, evaluates sustainability
practices and programs in curriculum, research, engagement, operations planning and administrative practices.

The STARS program recognizes third-party sustainability certification by several established green building councils including the International Living Future Institute’s Living Building Challenge (LBC) and the United States Green Building Council’s (USGBC) Leadership in Energy and Environmental Design (LEED®) programs. LEED Certification is encouraged, but not required, for projects at Saint Mary’s College. Whether certified or not, LEED criteria and checklists, or similar third-party evaluation systems, provide an effective and industry-recognized system for evaluating sustainable design and construction and an effective tool for compliance with the California Green Building Standards Code (CGBSC).

The College will also require designers for each project to complete, in coordination with the Sustainability Coordinator and Director of Project Management, the appropriate LEED Checklist as a tool for analysis and implementation of sustainable design measures. This includes considering sustainable measures within the following categories:

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation and Design Process

In coming years, State and local codes will evolve toward net-zero energy and net-zero water use. Renewable energy sources will be essential to achieve long-term energy reductions that will benefit both the College and the community. New construction and renovation projects should
strive to incorporate building-integrated photovoltaic (PV) products such as:

• PV panels at roof wells or over flat roof areas where they are not visible from adjacent grade levels;

• PV panels over parking areas that are not in the primary view corridor approaching the Chapel; and/or

• PV overlays at appropriate windows and skylights

Water reduction is another high priority for any institution in California, and the Landscape Design Guidelines provide clear guidance and detail for how the College can reduce water usage and pre-treat stormwater runoff onsite.

Maintaining and embracing the College’s rich architectural tradition while planning for the future is a primary focus of this chapter. The intent is not to dictate a prescriptive formula for future projects, but to provide a framework that will ensure the continued enhancement of Saint Mary’s Spanish Colonial Revival inspired campus and natural environment. New buildings, additions to existing buildings, and refined landscapes should not simply repeat the forms and elements of the 1928 buildings and diminish the unique character of the historic buildings, but respectfully complement the campus’ rich design heritage.

This chapter includes the following sections:

• Architectural Design Guidelines
• Historic Architectural Design Guidelines
• Landscape Design Guidelines
• Signage and Wayfinding Guidelines
• Stormwater Management and Sustainability Design Guidelines
• Noise Standards
Chapter Four: Design Guidelines and Standards

Architectural Design Guidelines

Designs for new buildings or additions to existing buildings must consider and respond to the architectural context of neighboring structures. This approach will generally lead to designs that are most influenced by the Spanish Colonial style within the core campus area defined by De La Salle Drive ring road and more interpretative of the Spanish Colonial style outside the ring road where existing buildings tend to be more contemporary.

The consistent use of materials and finishes throughout the campus is one of the most important factors in creating a coherent campus. As evidence of this point, even the most non-contextual and least appropriate buildings at Saint Mary’s have minimized their visual impacts by using the campus’ traditional exterior materials.

This section expresses the College’s commitment to creating new architecture that does not merely use stucco walls and clay tile roofs but is truly inspired by the historic resources and character of the campus.
New Construction

New buildings on the campus must complement the existing historic context and the architecture of adjacent buildings but be distinguishable from the historic resources found at Saint Mary’s.

To maintain the special architectural status of the College’s historic buildings, especially the Donovan buildings that formed the 1928 campus, new buildings should not merely replicate the historic buildings in whole or in part. Rather, new construction should integrate the essence of the character-defining components of the historic buildings in new and thoughtful ways.

Since 1970, the College has constructed many new buildings with varying levels of success integrating the campus’ character-defining components. Future buildings shall pay homage through a thoughtful interpretation of the Spanish Colonial style and its traditional material palette, allowing each building to creatively stand on its own while seamlessly blending into the campus fabric.

All new buildings, including new additions to existing buildings, shall comply with applicable building codes and local ordinances, including the Americans with Disabilities Act and the State of California’s Title 24 Building Energy Efficiency Standards.
Renovations of Existing Buildings

The renovation of an existing Saint Mary's building shall respect the forms, proportions and footprint of the original building. Where still intact, the character-defining features of buildings shall be preserved.
Design Components
All new construction and additions to existing buildings shall incorporate the components that have historically defined the architectural vocabulary of the Saint Mary’s campus. These components, discussed on the following pages, are critical in shaping the architectural fabric of the campus:

- Site Planning
- Massing, Footprint and Height
- Towers
- Roofs
- Arcades
- Exterior Walls
- Exterior Doors and Windows
- Entrances
- Stairs, Ramps and Railings
- Signage
- Decorative Elements

SITE PLANNING
The campus, as first designed by John Donovan, has several defining features that organize the campus buildings and grounds:

- Buildings and outdoor spaces are organized axially and often symmetrically about the campus’ primary axes;
- Buildings either individually or with others form rectilinear outdoor courtyards; and
- Arcades, either integrated with buildings or freestanding, cover the central primary circulation paths

New buildings shall:

1. Maintain and continue the axial relationships between buildings and outdoor spaces.
2. Employ compositional symmetry, both in plan and elevation, when the building or portions of the building terminate axes. Symmetry is not required for all building plans or facades, but should
Chapter Four: Design Guidelines and Standards

be used in appropriate locations to reinforce the overall campus plan.

3. Respect and not obstruct the views or structures that terminate axes.

4. Complement their adjacent structures and reinforce the character of its campus neighborhood whether academic, residential or recreational.

5. Create or enhance outdoor courtyard spaces with other buildings.

MASSING, FOOTPRINT AND HEIGHT

The massing, overall dimensions, and heights (both in feet and number of stories) of new buildings and additions to existing buildings shall:

1. Be appropriate for the programmatic needs of the facility.

2. Comply with the California Building Code and local zoning regulations.

3. Complement those of adjacent buildings, especially when adjacent to a historic resource.

4. Academic buildings, especially those at the central Chapel Green, shall contribute to the definition of the outdoor space and reinforce the massing and axial symmetry of the original Donovan campus plan.

5. Residential buildings should complement existing adjacent residence halls. The siting and massing of new residence halls should promote student neighborhoods and communities.

6. Some buildings, such as recreational facilities or parking structures, will likely have larger footprints or higher interior spaces than the original campus structures. Designers shall articulate the building mass of those structures to mitigate the effects of these larger buildings and maintain a scale that is consistent with the existing campus context.

TOWERS

It is important to note that the Chapel tower stood alone and unrivaled for decades.

1. Towers, if proposed for new buildings, shall not in any way compete with the primary tower of the Chapel or detract from its central importance as Saint...
Mary’s signature building.

2. The Donovan buildings incorporated vertical elements, such as the stair towers at De La Salle and Augustine Halls, but the tops of the stair tower roofs rise above the buildings’ main ridge line by only a few feet.

**ROOFS**

Clay tile roofs are one of the most identifiable characteristics of the Spanish Colonia Revival style. At Saint Mary’s, the original and subsequent buildings predominantly have hipped ends; gable ends are rare. The most notable example of a gable-ended roof is found on the east and west elevations of the College’s iconic building, the Chapel. Entering the campus from Saint Mary’s Road, the profile of the Chapel, with its gable end and bell tower standing in silhouette against the hills and sky beyond, is the visual and physical terminus of the central entry axis.

The original clay tile roofs at Saint Mary’s are characterized by:

- Hipped ends and corners
- Roof slopes that range from 4:12 to 5:12
- Deep eaves with exposed decorative rafter tails
- Barrel type and S-shaped tiles
- Copper half-round gutters
- Copper conductor heads and downspouts

1. New buildings shall use a similar vocabulary of elements at clay tile roofs. Rafter tails on new buildings shall complement but be distinguishable from those found on historic campus buildings.

2. Conceal flat (low-slope) roofs with clay tile mansard roofs or, when appropriate, with parapet walls that follow historic precedents on the campus.

3. Mechanical rooftop equipment, including photovoltaic panels, shall not be visible at campus grade level. Use parapet walls or clay tile mansard roofs to conceal mechanical equipment.
Chapter Four: Design Guidelines and Standards

ARCADES

The exterior arcades of the Donovan buildings are signature elements of the 1928 campus that established an architectural precedent for subsequent construction at Saint Mary’s. These arcades, some freestanding and some along the principal facades of buildings, are characterized by:

- Square concrete or plaster columns (approximately 1’-4” square) with base and capital moldings and chamfered corners, painted white. The columns are approximately 9’-0” to 9’-6” high, spaced approximately 11’-0” on center, forming a clear walkway that is about 10’-0” wide.

- Red-stained concrete flooring or brick paving

- Painted metal rails where a guard is required

- Decorative pendant lighting

- Heavy timber wood framing with exposed wood rafters with decorative rafter tails, painted brown

- Exposed wood roof decking, painted brown

- Copper half-round gutters with copper downspouts

- Clay tile roofing with a single slope when against a building and gabled shape when freestanding; in all cases, the roof slopes are approximately 4.5:12

- Solid walls with arched openings at arcade intersections or terminations

- Square architectural portals at grade and/or roof level transition points along an arcade. In some cases, these transitional volumes conceal stairs.
During the 1970s, campus architect Kazuo Goto designed a second generation of arcades that is quite different from, but compatible with the 1928 arcades. The characteristics of these arcades include:

- Square columns of stacked adobe-like slump block (concrete masonry units), 1'-4” square, painted white. The columns are spaced approximately 12’ to 13’ on center, have an average height of 8’-8” and form walkways that are approximately 8’ to 9’ wide
- Concrete paving (exposed aggregate in some locations)
- Decorative pendant lighting
- Heavy timber wood framing with exposed wood rafters
- Exposed wood roof decking
- Painted metal gutters and downspouts
- Single slope roofs are typical adjacent to buildings. At the Soda Center and at freestanding arcades, the roof forms are often cross gabled and sometimes follow the slope of the site

- Clay tile roofing at arcades adjacent to buildings
- Built-up roofing with gravel cap at freestanding arcades

New buildings should utilize arcades in appropriate locations to connect buildings, extend exterior circulation pathways, define exterior courtyards and enrich the architectural design.

New arcades should complement the vocabulary of existing arcades at Saint Mary’s using similar:

1. Overall proportions of width to height
2. Column proportions and spacing
3. Materials and construction technology
4. Painted metal stair railings or guards where required
5. Roof slopes and materials
Chapter Four: Design Guidelines and Standards

EXTERIOR WALLS, DOORS AND WINDOWS

Bearing walls with recessed doors and windows are defining characteristics of Spanish Colonial buildings. The concrete walls and interior wood furring of Saint Mary's 1928 buildings are not as massive as the adobe walls found at California's Missions, but they are substantial. As is typical with Spanish Colonial Revival buildings, the doors and windows of Saint Mary's earliest buildings are set back from the exterior surface, allowing the plaster finish to turn into the door and window openings and terminate against the door and window frames.

Thick walls are also beneficial today. They allow for additional building insulation and help control sun solar gain within the building. New buildings shall:

1. Have thick walls (8” to 10” thick minimum)
2. Recess windows and doors
3. Create a regular pattern of wall penetrations for wall openings
4. Extend the plaster wall finish into the door or window opening at the jambs and heads

The 1928 buildings originally had wood doors and windows with single pane glazing. Some of the original doors remain in place, especially those protected under the cover of the arcades, but many of the door leaves were replaced with wider, accessible doors. Over time, the College has replaced many of the original double-hung wood windows with aluminum windows that are either fixed, casement type, or single-hung.

Windows and doors at new buildings shall:

1. Match the approximate proportions and rhythm of openings in existing historic resource buildings
2. Larger, horizontally proportioned windows for academic buildings
3. Smaller, vertically proportioned windows for residential buildings
4. Have metal frames with a thermal break, or use metal-clad wood windows
5. Have dual-glazed insulated glazing panels (as a minimum)
Window and door subdivisions in existing buildings or additions shall complement but not duplicate the muntin pattern of surviving historic windows.

**ENTRANCES**

The original Donovan buildings are rich in ornament and detail at primary facades and entrances, but quieter on the side and rear elevations, establishing a clear hierarchy of facades and their relative importance. Dante and Galileo Halls are excellent examples of this approach.

Buildings at Saint Mary’s typically use architectural measures to signify entrances:

- Porches, arcades or recesses create depth and shadow
- Arches distinguish entry façade doors and windows from rectangular openings in other locations
- Columns, pilasters
- Decorative plaster ornament
- Ornamental iron balconies or window grilles
- Decorative light fixtures
- Mosaic tile at niches
- Sky blue soffits at porches

New buildings shall incorporate the spirit of these or similar architectural features consistent with the overall design of the new facility. However, new buildings should not literally copy the defining characteristics of historic resources and thereby diminish the significance of those buildings.

Secondary entrances, especially those for student services may use canopies or fabric awnings to identify the door locations.

*New arcade and entrances to the Faculty/Staff Dining Room at Oliver Hall*
STAIRS, RAMPS AND RAILINGS

When stairs and/or ramps are required at grade transitions or entrances to buildings:

• Comply with the Landscape Design Guidelines

• Ensure that an accessible ramp, if used in addition to a stair, provides an equivalent experience in reaching the same destination as the stair

• Install code-compliant rails and guards that are similar to existing rails at Saint Mary’s: (a) match the typical handrail profile; and (b) paint metal railings and vertical supports

SIGNAGE

Consistent and clear exterior signage is important for wayfinding and building identification. The College has developed signage standards for both exterior and interior applications throughout the campus.

For exterior signs mounted on buildings:

• Use durable materials, graphics, fonts and colors that follow or complement the campus standards.

• Develop building signage at each entrance that is compatible with similar signs for other buildings on campus. Where possible, integrate the signage into the façade composition using a recessed or raised panel or other architectural element to define the signage area.

• As required by the Authority Having Jurisdiction (AHJ), locate a building identification number that is visible to emergency vehicle drivers from a nearby street or driveway. If numbers are required, it is acceptable to match the painted identification numbers currently found on campus.

• Ambient building lighting may be used to illuminate signs. Internally illuminated letters, backlit panels and digital displays are not acceptable.

• Please refer to the Landscape Design Guidelines for information regarding monument and other signs that are not attached to a building.
DECORATIVE ELEMENTS

The Chapel shall remain the most ornate building at Saint Mary’s College; it is the centerpiece of the campus, both physically and spiritually.

Decorative elements should focus attention to significant and special building components: entrances, arcades, special rooms, etc. Decorative details could include:

- Decorative Plaster
- Water tables
- Mouldings
- Medallions and panels
- Column or pilaster bases and capitals
- Ornamental metal
- Balconies
- Grilles
- Railings
- Awning brackets
- Decorative Tile
- Mosaic tile at niches or recesses
- Pictorial or geometrically patterned panels
- Decorative lighting fixtures
- Wall sconces
- Pendants
TEMPORARY STRUCTURES

Temporary or modular buildings are often needed to meet short-term space needs. With virtually no vacant space on the campus, temporary structures can provide surge space for office, classroom and other needs as buildings are renovated or under construction. The Rheem campus can sometimes provide space for temporary academic needs or storage purposes, but when this is not possible, modular buildings on the main campus should conform to the following guidelines:

Site modular structures in deference to permanent buildings:

- Do not obstruct permanent circulation or visual axes
- Paint buildings, trim and rails to match adjacent structures and blend into the overall campus texture
- Provide minimal landscaping:
- Install temporary asphalt paving at pathways

- Provide accessible ramps to reach entrance doors if they are elevated above grade level
- Install temporary planting to conceal ramps if the modular buildings are in place for several years or are sited in visible locations
Chapter Four: Design Guidelines and Standards

Historic Architectural Design Guidelines

Protecting the historical character of the campus is important to the College. Buildings that are approximately 50 years of age or older must be surveyed to determine if they are eligible for listing on the California Register of Historical Resources. These properties must be evaluated for their significance under the California Environmental Quality Act (CEQA) (Guidelines Section 15064.5). Under CEQA, projects that would affect identified historic resources must be evaluated for compliance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties.

The Standards define four types of treatments for historic buildings: Preservation, Rehabilitation, Restoration and Reconstruction. Rehabilitation, the applicable treatment for buildings on the Saint Mary’s campus that qualify as historic resources, is defined as “the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural and cultural values.”

Buildings Currently Identified as Eligible for Listing as Historical Resources

- Large heritage oak tree framing an open space
- An original 1928 stairway
### Table 4.1 Buildings Eligible for Listing as Historical Resources

<table>
<thead>
<tr>
<th>No.</th>
<th>Current Name (listed alphabetically)</th>
<th>Year Completed</th>
<th>Architect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alemany Community Brothers’ Residence</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>2</td>
<td>Assumption Hall</td>
<td>1942</td>
<td>Unknown</td>
</tr>
<tr>
<td>3</td>
<td>Augustine Hall</td>
<td>1927-1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>4</td>
<td>Aquinas Hall</td>
<td>1927-1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>5</td>
<td>Cassin Student Union</td>
<td>1942</td>
<td>Unknown</td>
</tr>
<tr>
<td>6</td>
<td>Chapel</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>7</td>
<td>Dante Hall</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>8</td>
<td>De La Salle Hall</td>
<td>1927-1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>9</td>
<td>Dryden Hall</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>10</td>
<td>Fenlon Hall</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>11</td>
<td>Galileo Hall</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>12</td>
<td>Justin Hall</td>
<td>1960</td>
<td>Milton T. Pflueger</td>
</tr>
<tr>
<td>13</td>
<td>Madigan Gymnasium</td>
<td>1929</td>
<td>John Donovan</td>
</tr>
<tr>
<td>14</td>
<td>Mitty Hall</td>
<td>1960-1961</td>
<td>Milton T. Pflueger</td>
</tr>
<tr>
<td>15</td>
<td>North Arcade</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>16</td>
<td>Oliver Hall</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>17</td>
<td>Power Plant (Cilsa Hall)</td>
<td>1927-1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>18</td>
<td>Psychology Department</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>19</td>
<td>Saint Mary’s Community Brothers’ Residence</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
<tr>
<td>20</td>
<td>Siena Hall</td>
<td>1960</td>
<td>Milton T. Pflueger</td>
</tr>
<tr>
<td>21</td>
<td>South Arcade</td>
<td>1928</td>
<td>John Donovan</td>
</tr>
</tbody>
</table>

**Buildings Eligible for Listing as Historic Resources**

Table 4.1 identifies the 21 buildings located on the campus that are currently identified as eligible for listing as Historical Resources and evaluation under CEQA.
Character Defining Materials and Features
At Saint Mary’s, the general character defining materials and features of buildings that meet the eligibility requirements for listing per CEQA can be summarized using three different eras of campus development as follows:

1928 – ORIGINAL CAMPUS BUILDINGS
Overall Building Designs
• Axial relationships and symmetry among buildings and exterior spaces
• Relatively narrow building footprints
• Two to three stories high
• Arcades and formal courtyards
Exterior Materials and Openings
• White stucco on thick walls
• Recessed windows
• Arches at special locations
• Clay tile roofs

1940-1950 ERA BUILDINGS
Overall Building Designs
• Axial relationships and symmetry
• Relatively narrow footprints
• One to two stories high
Exterior Materials and Openings
• White stucco walls
• Recessed windows

• Hipped (typical)
• Gabled (for special buildings such as the Chapel)

Ornamentation
• Decorative cast concrete & plaster at front/entry facades
• Sparsely detailed at secondary facades
• Deep roof overhangs with exposed, shaped rafter tails
• Copper gutters and downspouts
• Ornamental ironwork
• Decorative light fixtures

49ers football players resting during a practice session on Saint Mary’s campus
Chapter Four: Design Guidelines and Standards

- Arched windows at Post Office (currently known as the Cassin Student Union)
- Clay tile roofs (hipped)

**Ornamentation**
- Few decorative cast concrete and plaster details
- Deep roof overhangs with exposed, shaped rafter tails
- Copper gutters and downspouts

**1960S ERA BUILDINGS**

**Overall Building Designs**
- Reduced emphasis on symmetry
- Relatively narrow footprint
- Two to three stories high

**Exterior Materials and Openings**
- White stucco
- Wood and plaster infill panels
- Metal windows
- Clay tile roofs (hipped)
Historic Resource Rehabilitation

Where rehabilitation of historic resources is appropriate per the Secretary of the Interior's Standards or additions are planned to historic buildings, the project shall follow the Standards for Preservation (refer to the previous subsection) as well as the following Standards for Rehabilitation:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
Chapter Four: Design Guidelines and Standards

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Additions to Existing Historic Resources

The Rehabilitation Guidelines (see above) establish the Secretary of the Interior’s Standards for additions to historic buildings. The materials, features, size scale and proportion and massing of an addition to a historic building should complement the original architecture but the addition shall be visibly distinguishable from the historic resource.

Please refer to the subsections regarding “Design Components” and “Color & Material Palette” in the Architectural Design Guidelines section for additional information related to building components and materials for additions to existing buildings.

The Cassin Student Union was the original campus Post Office
Chapter Four: Design Guidelines and Standards

Code Compliance for Historic Resources
Renovations of existing buildings shall comply with all current applicable codes and ordinances, including provisions for:

- Life safety
- Accessibility
- Emergency egress
- Seismic performance
- Energy conservation
- Water conservation
- Stormwater management

Alterations and new construction for accessibility compliance shall be designed to minimize material loss and visual change to a historic building.

For eligible buildings, the California Historical Building Code (CHBC) may offer appropriate and advantageous options to the California Building Code (CBC) for compliance with non-accessibility related improvements. Designers shall meet with the Authorities Having Jurisdiction (AHJ) to confirm the appropriate codes for each proposed project.
Chapter Four: Design Guidelines and Standards

Landscape Design Guidelines

The designed landscape of the campus is as important as the Spanish Colonial architecture in creating a strong unifying element. Landscape creates identity, orientation, and a sense of place for the campus as a whole. This occurs when the continuity of plants, paving patterns, site materials and site furnishings consistently relate to each other. Landscape design allows for great variety in detail, providing opportunities for particular places to become landmarks, while ensuring that the most compelling image is that of the campus as a whole.

Creating a harmonious unified and rational landscape aesthetic for the campus is a primary goal of the following landscape design guidelines. These guidelines define the aesthetic model to be followed for subsequent projects. Of greatest importance in the aesthetic guide is an intimate knowledge of the College's values.

The Landscape Design Guidelines are divided into three sections:

- Site Design
- Planting
- Irrigation
Site Design

The campus can be seen as a collective set of spaces, each serving a programmatic role in the function of the campus. Quads, plazas, courtyards and greens provide outdoor spaces to congregate, eat, study, live and learn. Athletic fields are the venue to compete, recreate and watch a variety of sporting events. These spaces and the walkways that link them are outdoor rooms and hallways to pass through enroute from points of origin to destinations.

Despite steep topography in many locations, designers shall strive to create an accessible campus with aesthetically integrated mobility solutions. Additionally, exposure, context and scale will vary from site to site and influence design. The unique environmental and architectural character of the campus should guide future project design while maintaining and enhancing the positive physical and spiritual attributes of the grounds.

The Site Design section recommends design policies for a range of landscape spaces and typologies throughout the campus. As established in the Introduction in these Landscape Design Guidelines, the directives state the rationale of the design intent and then demonstrate several examples of implementation. The recommendations in the Site Design section are not meant to be absolute rules, but to allow a variety of design solutions which support the primary purpose.
CAMPUS-WIDE LANDSCAPE CONCEPTS

Properties that are greater than 50 years of age must be surveyed to determine if they are eligible for listing on the California Register of Historical Resources. The Saint Mary’s College of California campus opened in 1928 and building projects are evaluated for their significance under the California Environmental Quality Act (CEQA) (Guidelines Section 15064.5).

The Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising Federal agencies on the preservation of historic properties listed in or eligible for listing in the National Register of Historic Places. The Rehabilitation Standards are most relevant to campus projects.

For projects which the Standards for Rehabilitation do not apply, Campus-wide New Landscape Construction Concepts shall be followed.

CAMPUS-WIDE LANDSCAPE REHABILITATION CONCEPTS

The Secretary of the Interior’s Standards for Rehabilitation typically apply to buildings. They also encompass related landscape features and the building’s site and environment. Follow the following Rehabilitation Concepts:

A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the site and environment.

The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or landscape elements from other spaces, shall not be undertaken.

Plaza surrounded by an arcade
Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.

Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

New construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

New construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

**CAMPUS-WIDE NEW LANDSCAPE CONSTRUCTION CONCEPTS**

Like the New Construction described in the Architectural Design Guidelines, new landscape construction should apply the following New Landscape Construction Concepts:

Complement the historic campus context and adjacent landscape but be distinguishable from adjacent historic landscapes.
While an historic area conveys a certain sense of time and place associated with its history, it also remains dynamic, with construction of new buildings and landscape spaces occurring over time. When new landscape construction occurs, the design shall reinforce the basic visual characteristics of the area. This does not mean that new landscapes must look old. In fact, imitating historic styles found on campus is discouraged. Historians prefer to be able to “read” the evolution of the site, discerning the apparent age of each landscape by its style and method of construction. When a new landscape is designed to imitate a historic style, this ability to interpret the history of the site is confused. Rather than imitating older landscape features, a new design should relate to the historic design characteristics of the area while also conveying the stylistic trends of today.

New landscape construction should not merely replicate adjacent designs but rather embody the spirit of the landscape context and new landscape construction environment.

New landscape construction may do so by drawing upon some basic landscape features—such as the way in which a plaza is located on its site, the manner in which it relates to the adjacent building and its basic scale, form and materials—rather than applying detailing which may or may not have been historically appropriate. When these design variables are arranged in a new landscape design to be similar to those seen traditionally in the area, visual compatibility results. Therefore, it is possible to be compatible with the historic context of the area while also producing a design that is distinguishable as being newer than the historic landscapes of the area.

**SUSTAINABLE DESIGN PRACTICES**

Saint Mary’s College is committed to a sustainable physical environment and wishes to express that ethic in the design and operation of the campus. Projects on campus should integrate a sustainable attitude for projects that will be identified, programmed, designed and constructed.

Several references exist, and indeed some contain mandatory requirements
Students gather food from the Legacy Garden

of state and local jurisdictions, to aid development of high performance and sustainable landscapes: Town of Moraga Design Guidelines, 2011 California Access Compliance Reference Manual, Bay-Friendly Landscape Guidelines, Water Efficient Landscape Ordnance (WELO), Start at the Source, US Green Building Council (USGBC), California Green Building Standards Code (CalGreen), and Sustainability Tracking, Assessment & Rating System™ (STARS) program. STARS is used as a checklist in order to meet the campus goal of creating new and highly efficiency in resource performance. These documents are referenced for all campus site designs.

Sourcing building materials plays an important role in the sustainability of the design. When possible and practical, materials should be purchased from sources within a 500-mile radius.

The Stormwater Management And Sustainable Design Guideline section of these Landscape Design Guidelines illustrates examples of stormwater treatment methods.

**SUSTAINABILITY**

The over-riding principle of sustainable landscape design is creating a campus that conserves resources. The typical landscape requires many inputs: capital, labor, water, pesticides, and fertilizers. All landscapes produce wastes: plant trimmings, polluted run-off from pesticides, fertilizers and hydrocarbons from parking lots, and water lost by evaporation. The concept of sustainable landscaping asks us to examine the input and output of our landscapes and find ways to minimize both. Applying the following principles saves time and money, and creates a landscape that is environmentally responsible.
Chapter Four: Design Guidelines and Standards

- Reduce water consumption by renovating existing landscape areas using water conserving plant palette. See Planting Section for additional information.

- Group plants with similar water requirements to eliminate over-watering and under-watering plants.

- Replace non-actively used turf grasses with water conserving drought tolerant grasses, which don’t require biweekly mowing.

- Replace natural grass athletic fields with artificial turf when NCAA and best practice standards allow for such replacement to eliminate watering, fertilizing, mowing and re-sodding of natural grass.

- Install a weather-based irrigation system.

- Explore supplementing potable irrigation water with groundwater sourced on-site.

- Continue organic weed and pesticide management (TruGreen).

- Implement soil management techniques to promote and maintain healthy soil, such as mulching with redwood compost/oak leaves. Mulch to slow evaporation and erosion, and to control weed growth. As mulch decomposes, it adds to the nutrient content of the soil.

- Reduce stormwater discharge into waterways implementing Best Management Practices.

- Replenish groundwater and control runoff with permeable pavers.


**CAMPUS VEGETATION TYPOLOGY**

Reducing water consumption for landscape irrigation is paramount to sustainable landscape design. This diagram illustrates a new campus paradigm for planting typologies with water conservation in mind.
Chapter Four: Design Guidelines and Standards

The following guidelines for vegetation selection are shown on the Campus Vegetation Typology diagram.

**Grass Athletic Fields**
- Use low-water use turf grass such as tall fescues at baseball and softball fields

**Grass Areas**
- Replace small, non-actively used grass areas with water conserving grasses or drought-tolerant plants. Water conserving grasses require mowing only two or three times annually. These grass areas project a natural meadow aesthetic and although they will tolerate some foot traffic these grasses should not be used where heavy foot traffic is anticipated.
- Actively utilized grass areas historically used for special events and casual recreation shall be preserved to accommodate formal and informal functions. Such grass lawns should be planted with low-water consuming tall fescues.

**Artificial Turf Athletic Fields**
- Use artificial turf at soccer, rugby and recreation fields when NCAA and best practice standards allow for such replacement. Unlike live grass, artificial turf requires no mowing, aeration, irrigation nor fertilizer and may be utilized when wet field conditions would normally close down a grass field.

**Drought Tolerant Plants**
- Replace existing medium and high-water use plants as they become unhealthy or expire with drought tolerant plants.

**California Native Plants – Maintained**
- Plant and maintain California native plants. Selectively prune branches to maintain healthy specimens and eliminate hiding places.

**California Native Plants – Unmaintained**
- Plant California native plants and allow them to grow naturally. Perform pruning and maintenance to establish fire protection zones.
STORM WATER MANAGEMENT

Saint Mary’s College does not discharge stormwater into a Municipal Separate Storm Sewer System (MS4). Though Saint Mary’s College does not fall under Non-traditional MS4 regulations, it has drawn from those regulations and guidelines; and best management practices in the development of its own Stormwater Pollution Prevention Plan (SWPPP). The SWPPP may be obtained by contacting the Saint Mary’s Director of Environmental Health & Safety. Project design teams shall use current and relevant publications. This SWPPP identifies potential on-campus sources of pollutants that might affect the stormwater quality discharges and provide best management practices in order to reduce non-stormwater discharges in the storm drain system.

Construction and post-construction activities shall be governed by the Construction General Stormwater Permit, if applicable, and are not addressed in the SWPPP. Saint Mary’s engages the services of a licensed civil engineer to develop a Stormwater Pollution Prevention Plan specific to each construction project, if such project is governed by the General Construction Stormwater Permit, or when otherwise required by the local authority. In such a case, Saint Mary’s complies with the requirements of the General Construction Stormwater Permit of local authority.
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CAMPUS AXES

The original campus was arranged on an axial grid emphasizing the relationship between Saint Mary's Parkway, the chapel, the 1920s buildings and De La Salle Drive. Beyond the buildings and roadways there was much land for expansion. For the most part, these historic axes have been respected as new campus buildings have been constructed but occasionally misaligned axes resulted in misaligned axis nodes. Where feasible, these misaligned axes should be corrected. Creating new misaligned axes should be avoided.

Future projects should preserve and enhance historic axes and site lines. Where appropriate, new axes which do not detract from the historic or major axes may be created by new campus designs. Where appropriate, sight lines may terminate with appropriately scaled focal points.

CAMPUS AREAS

Understanding the composition of the campus is paramount to the use of these Landscape Design Guidelines. The campus may be diagrammed into seven distinct areas. Each area is a composition of spaces and buildings organized for specific use or set of uses. Within these areas there is a variety of landscape spaces: formal and informal gathering spaces; parking areas and roadways; spaces to congregate and spaces to pass through, to name a few.

Although each area has unique attributes which define its character, reoccurring themes in the landscape are the glue which binds the campus.

The following pages recommends design policies for a range of area-specific and campus-wide landscape spaces and typologies to reinforce the cohesive campus notion.
Chapter Four: Design Guidelines and Standards

Campus Entry Areas

Saint Mary’s Parkway

- Screen athletic fields and parking structure such that the view to Chapel and Cross are not compromised by competing visual distractions.
- Replace cedar and plum trees with double row trees and shrubs.

Security Gatehouse

- Site gatehouse as per the Phase 2 project opposite rugby field parking entrance.
- Park security vehicles at rugby parking lot.

Chapel Green

- Relocate CCCTA transit stop area approximately 30’ east of current location to complete pedestrian walkway on axis with Filippi Hall and Future Library.
- Plant to infill missing cork oak trees.
- Provide 8’ wide concrete paths at the north and south edges of the Chapel Green, connecting the transit stop with the Chapel Plaza.
- Place picnic tables between cork oak trees.

Campus Core Areas: Building Entries

- Ensure main entry doors are in plain view with no potential hiding places.
- Provide appropriately scaled gathering spaces outside main entry.
- Place trash, recycling and ash receptacles in visible, convenient, non-obtrusive locations.
- Provide adequate lighting.
- Coordinate lighting with Architectural Design Guidelines and avoid over-lighting due to duplication and under-lighting due to omission.
- Select paving materials from established paving material palette of existing materials at building entries such as brick steps; exposed aggregate paving with brick bands.
Residential Areas: Building Entries

- Maintain clear sightlines to building entrances.
- Place trash, recycling and ash receptacles in visible, convenient but non-obtrusive locations.
- Place bike racks in convenient locations away from entrances.
- If space, topography and exposure allow, design confirmed use-appropriate sized grass areas to encourage outdoor activities.
- Select paving materials from established paving material palette of existing materials at building entries in the residential area, such as concrete steps; exposed aggregate paving with concrete bands.
- Provide appropriately scaled entrances and landings.

North Academic Areas

- Create larger paved entries which emphasize primary building entrances.
- Delineate pedestrian and vehicular routes with planting areas and pavement differentiation.

Support Areas

- Maintain necessary minimum driveway widths for delivery vehicles.
- Locate loading zones convenient to building service entrances.
- Screen loading areas from view from primary walkways and roadways.

Athletic and Recreation Areas

- Clearly designate entrances to athletic facilities.
- Screen baseball field fences from Campus Core vantage points.
- Provide 8’ minimum wide planting areas for screening where spectating seating doesn’t occur.
Chapter Four: Design Guidelines and Standards

Hillside Areas

The overriding goal is to maintain park-like open space in Hillside Area.

- Preserve hillside open spaces and the naturally silt-filled riparian woodland formerly known as Lake La Salle.
- Endeavor to maintain open and uncovered water courses which meander through the campus. Leave these seasonal waterways unaltered, except to remove non-native plant species such as ivy and blackberry.
- Preserve native vegetation and drainage patterns.
- Remove non-native trees and other plants listed in the USDA “Introduced, Invasive, and Noxious Plants”.
- No building shall occur in the areas as shown on Campus Master Plan.

CAMPUS OPEN SPACE

In part, the framework of buildings and roadways is methodically organized to optimize functional open space. These outdoor rooms have specific social and programmatic functions for collegiate community life. Campus Community Open Spaces shall occur primarily in the Campus Core Area to serve the general College population for a variety of activities where critical mass is conveniently central. These spaces shall be designed to accommodate the programmatic needs of intended user groups.

The athletic community and their spectators are served by Athletic Community Open Space relating to sporting events occurring primarily on the campus perimeter. This open space typology shall be designed to accommodate the programmatic needs of its users.

Maintain and enhance park-like setting of the unique backdrop of Undeveloped Open Space. Maintain these lands and other positive qualities which draw students, faculty and staff to the pastoral campus.

Historically, areas of the surrounding hillsides have been used for cattle grazing. That use continues today, which reduces wildfire vegetative fuel loads. Supporting the notion of access to open space, the College gave the East Bay Regional Park...
Chapter Four: Design Guidelines and Standards

District a trail right-of-way which links other trails within the regional trail system.

Courtyards and Plazas

• Scale space to its intended function.
• Create strong indoor/outdoor connections between adjacent buildings and outdoor space.
• Site furnishings should include appropriate choice of seating. Spaces may be furnished with donor benches if at least four may be sited. Consider seat walls or seat walls/planter walls to informally supplement tables, chairs or benches.
• Select paving materials from the palette of special paving.
• Illuminate spaces with Light Fixtures at Courtyards (see Site Lighting subsection for more information).

Streetscape

• Two-way roadways shall be 26’ wide, comprised of two lanes, separated by 4” wide double yellow lines and bound by concrete curbs and gutters.
• Where feasible, provide 8’ wide parkways to accommodate trees, low growing shrubs and Roadway Light Fixtures between roadways and walkways. Where 8’ parkways are not feasible, provide 4’ minimum wide parkway planted with trees and ground covers. Where 4’ wide parkways are not feasible, endeavor to provide a walkway next to roadway with trees, shrubs and/or ground cover next to the walkway.
• Walkways shall be 6’ wide concrete sidewalks parallel to roadways.
Chapter Four: Design Guidelines and Standards

PARKING AREAS

- Locate accessible stalls close to accessible building entrances and routes.

- Standard and compact parking stalls shall be 90 degree angle standard stalls, 9’ x 18’; compact stalls, 8’ x 18’; drive aisles, 26’ wide.

- Standard stalls shall comprise a minimum of 65% of total parking volume; compact stall shall comprise up to 35 percent of total parking volume.

- Plant trees to provide shade and reduce ambient air temperature of parking lot. See Planting Section for tree palette.

- Screen cars from view with evergreen shrubs, growing to 5’ tall.

- Where feasible, endeavor to use porous surface for parking stalls. Where permeable surfaces are not feasible for parking stalls, use asphalt and perforated curbs draining into bioswales. Use asphalt paving for parking area entrance and drive aisles.

- Locate Roadway Lights Fixtures in planting areas to provide minimum light levels required by code.

Temporary Parking Areas

- Use asphalt paving for parking area entrance and accessible parking stalls. Drive aisles and non-accessible parking stalls shall be paved with an engineered gravel.

- Parking stalls shall not be delineated but dimensions shall be based on current City of Moraga standards: 90 degree angle stalls, 9’ x 18’; drive aisles, 26’ wide.

- Locate accessible stalls close to accessible building entrances and routes. Dimensions, materials and slopes shall conform to current codes.

- Locate Roadway Lights Fixtures in planting areas to provide minimum light levels required by code.

- Screen cars from view with evergreen shrubs, growing 5’ tall.
Parking Structures

- Site parking structures to minimize overall height of structure.
- Place vehicle entrances such that adequate vehicle stacking will prevent roadway congestion.
- Delineate clear and separate paths of travel for pedestrians and automobiles.
- Provide 12-feet minimum wide planting areas to accommodate evergreen trees and shrubs for visible perimeter screening.

On-grade Parking under Buildings

- Place vehicle entrances such that adequate vehicle stacking will prevent roadway congestion.
- Delineate clear and separate paths of travel for pedestrians and automobiles.
- Plant to screen ventilation openings with evergreen trees and shrubs.

Crosswalks with Stop Signs

- Crosswalks shall be perpendicular to roadway travel direction.
- Where crosswalks occur at intersections, place stop signs immediately before crosswalk.
- ADA compliant curb ramps shall transition walkways and street crossings.
- Crosswalk stripes shall be 12” wide painted white with roadway reflectors aligned with each stripe.
- Crosswalks shall be illuminated with Roadway Light Fixtures located in planting areas.

Crosswalks without Stop Signs

- Crosswalks shall be perpendicular to roadway travel direction.
- ADA compliant curb ramps shall transition walkways and street crossings.
- Crosswalk stripes shall be 12” wide painted white with roadway reflectors aligned with each stripe.
• Crosswalks shall be illuminated with Roadway Light Fixtures located in planting areas.

• Maintain tree and shrubs to provide unobstructed sightlines of each other.

**Space between Buildings**

The space between buildings may be narrow or wide, dark or light, steep or flat, and include walkways. Regardless of the physical characteristics, such “pass through” spaces should endeavor to:

• Be delineated by 6’ wide concrete walkways.

• Be lit by Walkway Light Fixtures and may include emergency telephones.

• Provide Small Scale Trash & Recycling in convenient, yet non-obtrusive locations.

**SERVICE AREAS**

• The service areas themselves should be screened from view by walls, fences, planting, use of grade separation, or any combination of these.

• Access to service areas should be designed to create a positive interface with adjacent buildings and nearby pedestrian circulation.

• Design vehicular access to service areas with clear sightlines and clearances to provide safe interactions between drivers, pedestrians and property.

• Provide large or medium scale trash and recycling bins.
Chapter Four: Design Guidelines and Standards

TRANSFORMER SCREENING

- Screening of transformers shall be accomplished with evergreen shrubs growing to a mature height as tall as the transformer. Plants shall provide required vegetation clearances as described in current PG&E Greenbook.
- Concrete containment walls shall be stained black to diminish conspicuousness.
- Paint all transformers black or dark brown.

BACKFLOW PREVENTION DEVICE SCREENING

- Screening of backflow prevention devices shall be accomplished with evergreen shrubs as described above for transformer screening. Where appropriate consider concealing backflow prevention devices behind signage.
- Paint backflow prevention devices dark brown to be less conspicuous.

TRASH ENCLOSURE

- Place Trash Enclosures in convenient locations with vehicular access for servicing, yet aesthetically inconspicuous.
- Trash enclosures shall be designed in a style compatible with adjacent buildings. In the Campus Core Area such an enclosure may be designed in Spanish Colonial style with heavy lumber.
- All wood shall be painted dark brown to match fences.
- Provide tile roof, concrete slab and area drain if required by code.
- Plant to screen and soften the enclosure.
FENCES

• To preserve the open space campus quality, fences are discouraged. Where solid fences and screening is necessary fences shall be designed in a style compatible with adjacent buildings. In the Campus Core Area such a fence may be designed in Spanish Colonial style with heavy lumber.
• All wood shall be painted dark brown.
• Plant at the base of fences to reduce the visual impact of the fence.
• Chain-link fences are discouraged.

SIGNAGE

• An in depth study has been conducted to analyze the functionality and aesthetics of the existing signage system. This study examined all signs as a package and recommend modifications to their locations, aesthetics and durability. General recommendations are included for review but should be weighed against recommendations of this study.
• Gateways provide a unique sense of identity. Gateway signage materials should include prevalent materials of the building fabric such as white painted stucco. The campus logo should be incorporated along with text identifying the college. Letters on gateway elements should use the font style already in use for campus signage. The size of text and logo must be legible for the primary reader (vehicular and/or pedestrian). The logo and letters on gateway elements should be pin
mounted, fabricated of metal and bronze colored.

- Lighting is also an integral part of gateway design. If up lighting is provided, using ground mounted fixtures, care must be taken to select low profile, small fixtures which can be positioned to avoid glare and be screened from view. Care shall be taken to avoid over lighting and spill into the night sky.

- Campus maps shall be located at key decision making locations, such as near pedestrian egress points of parking lots, to help pedestrians orient and locate themselves within an area, which becomes a starting point for visitors to map out their own pathways.

- When building names are not integrated into the architecture, a free-standing sign shall be located near main building entrances in planting areas. Plants shall not obscure the visibility of the signage. Signs shall be visible from decision points enabling building identification without leaving the primary pathway.

- Spaces, such as Korth Corridor or St. Jude Plaza may be identified with flush on-grade signage. Cast-in-place letters are preferred to engraved or recessed letters which tend to collect and fill with debris. Wall mounted bronze plaques may be used to signify a small plaza, such as the Edward P. “Slip” Madigan Memorial Plaza.
LIGHTING

Campus light fixtures help to create a sense of identity within a campus and should be carefully selected to reflect an appropriate aesthetic and safety functionality. Some fixtures may vary by area, while others may be uniform throughout the campus. Even so, all fixtures should be related aesthetically to create a sense of cohesiveness to the campus.

The use of lighting should be integrally designed as part of the built environment and should reflect a balance for the lighting needs with the contextual ambient light level and surrounding nighttime characteristics of the community. In conjunction with the Town of Moraga Design Guidelines, recommended light level guidelines and uniformity ratios established by the Illumination Engineering Society of North America (IESNA), in the IESNA Lighting Handbook (current edition), should be considered when determining appropriate lighting design solutions.

Use the following guidelines for:

- Lighting designs should be designed to minimize glare, light spillover, energy conservation, and to maintain dark skies.
- Full cut-off fixtures, mounting heights, and shielding should be utilized to effectively control glare and light spillover.
- Light fixtures shall direct light downward to the extent possible.
- Lamps shall be high pressure sodium.
- The light color temperature shall be 3,000K.
- Any exterior lighting designs shall take into account all exterior lighting sources.

Use the following guidelines from the Town of Moraga’s Design Guidelines:

- The level of lighting should not exceed the needs for security and safety or detract from the aesthetics of the development.
- Outdoor lighting should be related to the design of the structure.
Chapter Four: Design Guidelines and Standards

- Outdoor light fixtures should be designed and mounted so that the source of light has minimal impact off site.
- Outdoor lighting should be directed inward toward the property and may require additional screening to avoid spillage onto adjacent residential properties.

MOBILITY

In effort to facilitate barrier free pedestrian movement through campus, apply the following mobility principles:

- Provide ADA compliant routes from all main building entrances to ADA compliant parking stalls and the CCCTA transit stop.
- Rehabilitate non-compliant ADA walkways for code conformance.
- Provide accessible crosswalks where none exist at roadway crossings, connecting otherwise accessible walkways.

- Connect non-continuous sidewalks with ADA compliant walkways.
- Correct pedestrian walkways and vehicular roadway conflicts.

CONCRETE WALKWAYS

- Design walkways with concrete, except temporary walkways and gravel walkways as noted.
- Walkways shall be 6’ wide.
- Joints shall be at 6’ on center.

GRAVEL WALKWAYS

- Use only for walkways connecting destinations through environments with special circumstances such as, redwood trees next to walkways with surface roots where excavation for concrete walkways would damage tree roots or walkway will sustain damage from tree roots; or infrequently used routes in natural settings where concrete...
walkway would be too formal.

- Walkways width shall be designed according to anticipated traffic and appropriate scale to the setting, 48” minimum.

CAMPUS CORE AREA: STEPS AND HANDRAILS

- Determine and follow the appropriate Landscape Concept (Rehabilitation or New Construction).
- Endeavor to preserve historic metal guardrails at the 1928 era historic buildings.
- Design steps and handrails to conform to current codes.

- Design steps using brick or concrete materials to complement nearest visually adjacent steps.
- Design painted metal handrails to complement nearest visually adjacent painted metal handrail.

ALL OTHER AREAS: STEPS AND HANDRAILS

- Determine and follow the appropriate Landscape Concept (Rehabilitation or New Construction).
- Design steps and handrails to conform to current codes.
- Design steps using concrete materials to complement nearest visually adjacent steps.
- Design handrails to use painted metal handrails. Omit metal pickets and guardrail where not required by code.
Chapter Four: Design Guidelines and Standards

CAMPUS CORE AREA: RAMPS AND HANDRAILS
- Ramps shall be paved with colored concrete.
- Design ramps and handrails to conform to current codes.
- Design painted metal handrails to complement nearest visually adjacent painted metal handrail.

ALL OTHER AREAS: RAMPS AND HANDRAIL
- Determine and follow the appropriate Landscape Concept (Rehabilitation or New Construction).
- Omit metal pickets and guardrail where not required by code.
- Design steps and handrails to conform to current codes.

CAMPUS CORE AREA: GUARDRAILS
- Determine and follow the appropriate Landscape Concept (Rehabilitation or New Construction).
- Endeavor to preserve historic metal guardrails at the 1928 era historic buildings.
- Design guardrail to conform to current codes.

ALL OTHER AREAS: GUARDRAILS
- Determine and follow the appropriate Landscape Concept (Rehabilitation or New Construction).
- Design guardrails to conform to current codes.
- Use materials for guardrails to match nearest visually adjacent guardrails.
**BENCHES**

- Place benches in plazas, courtyards, quads, near building entrances and along walkways in desirable locations.
- Place benches in various sun and shade exposures.
- Cluster benches where critical mass is desirable.
- Place benches sparingly in contemplative settings, focused on a view or landscape feature.
- Compose benches with other landscape elements such as trees.

**RE-USE OF EXISTING BACKLESS BENCHES**

- Cast concrete benches reference bygone days and are a visual reminder of the College’s history. Continue to re-use vintage cast concrete benches in the Campus Core area in similar period settings.
- Granite benches appear out of place in Mission style settings and shall be reserved for natural or artistic settings.
Chapter Four: Design Guidelines and Standards

PICNIC TABLES
- Picnic tables imply a casual setting. Place picnic tables in barbecue areas, such as on patios in the Residential Area and at Bertain Redwood Grove. Phase out use of picnic tables in Ferroggiaro Quad.
- Tables should not be permanently anchored, allowing flexibility of placement and spatial configuration.
- Provide other supportive site furnishings such as trash and recycling receptacles nearby.

TABLE AND CHAIR SETS
- Place table and chair sets in use-appropriate courtyards and quads.
- Do not affix table or chair legs to surface so as to allow free movement of furniture to accommodate flexibility of space and arrangements.

BIKE RACKS AND STORAGE
- Place bike racks in locations convenient to primary building entrances without cluttering or obscuring building entrances. Covered locations are best.
- Discourage securing bicycles to guardrails, handrails and other unintended appurtenances.
Chapter Four: Design Guidelines and Standards

REVERENT STATUARY

- Site and integrate reverent statues in landscape locations that support the values of the college and aesthetics established in these Design Guidelines.
- Select statues that are in scale with context.

PLANter POTS

- Use planter pots as accents at building entrances in the Campus Core Area sparingly.
- Select planter pots that are in scale with context.
- Use existing vintage planter pots to compliment building entrances of same time period. Use planter pots specified in the Site Furnishing Section at other locations.

WATER FOUNTAINS

In response to the 2015 State Water Resources Control Board request that Californians reduce water consumption, additional fountains shall not be constructed until water restrictions have been lifted. When water restrictions are lifted, apply the following concepts for water fountains:

- Use recirculating pumps.
- Avoid fountain designs that discharge a jet or stream of water into the air.
- Place water fountains in courtyards and plazas in sunny locations and where plant debris will not fall into fountains.
- Scale of fountains shall be compatible with setting and not obscure axes nor sightlines to building entrances. Materials, color, form and texture shall compliment context.
Chapter Four: Design Guidelines and Standards

PUBLIC ART

• Place public art in appropriate locations.

• Like water fountains, scale of public art shall be compatible with setting and not obscure axes nor sightlines to building entrances. Materials, color, form and texture shall compliment context.

TEMPORARY BUILDING ACCESS

• Use asphalt paving for pedestrian walkways.

• Use aluminum steps and ramps for access to raised temporary building entrances.

TEMPORARY WALKWAYS

• Use asphalt for temporary walkways.

• Install root barriers where trees with invasive roots occur.

• Edge with pressure treated lumber wood headers.
Planting

Landscaping provides many opportunities to support goals of greater sustainability. The use of plant species native to California and drought tolerant plants is highly recommended as they will create a campus environment and aesthetic unique to Saint Mary’s College. Native plantings provide wildlife habitat and require less water, fertilizer and pesticide to maintain. Cultivars of native species should be considered for their typically superior qualities (form, color, aesthetics, etc.). Invasive and overly aggressive native species are prohibited.

The need for campus security, especially in parking lots, should be addressed with regard to plantings. Plantings should be configured to avoid creating hiding places for predators.

Resistance of a plant to deer is related to the availability of other food. If there is an adequate supply of natural browse in the deer’s usual feeding ground, ornamental plants may be largely untouched. If natural food supplies are low, there will be an increased browsing in domestic gardens. If there is an extreme shortage of natural food, few if any plant species are totally resistant to deer. A heavy deer population also increases competition for food, with the result that plants relatively unpalatable in an area where deer are not numerous will be readily browsed in an area where deer abound.

Various factors can make a plant resistant to deer. Many of the most resistant plants (such as oleander) are poisonous, some at all times and others only at certain stages of growth. Palatability of non-toxic plants also varies with plant age and with the seasons. Experience in years of drought shows that “lists” are of little value – deer will eventually become desperate enough to eat (or try to eat) anything.

Because of these factors, the plant lists included in Tables 4.2 through 4.6 on the following pages should be considered as a general guide only.
<table>
<thead>
<tr>
<th>Table 4.2: Tree Plant List</th>
<th>Table 4.2: Tree Plant List (continued)</th>
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<tr>
<td><strong>Botanical Name</strong></td>
<td><strong>Botanical Name</strong></td>
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<td><strong>Common Name</strong></td>
<td><strong>Common Name</strong></td>
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<tr>
<td><em>Acer cercinatum</em></td>
<td>J uniperus chinensis ‘Torulosa’</td>
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<td>Vine Maple</td>
<td>Hollywood J uniper</td>
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<td>Acer palmatum var.’</td>
<td>Lagerstroemia indica var.</td>
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<td>Japanese Maple varieties</td>
<td>Crape Myrtle varieties</td>
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<td>*Aesculus californica</td>
<td>Leptospermum scoparium</td>
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<td>California Buckeye</td>
<td>New Zealand Tea Tree</td>
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<td>Arbutus ‘Marina’</td>
<td>Lyonothamnus floribundus aspleniifolius</td>
</tr>
<tr>
<td>Marina Strawberry Tree</td>
<td>Fern-leaf Catalina Ironwood</td>
</tr>
<tr>
<td>Arbutus menziesii</td>
<td>Magnolia spp.</td>
</tr>
<tr>
<td>Pacific Madrone</td>
<td>Magnolia species</td>
</tr>
<tr>
<td>Azara microphylla</td>
<td>Maytenus boaria</td>
</tr>
<tr>
<td>Boxleaf Azara</td>
<td>Mayten Tree</td>
</tr>
<tr>
<td>Betula spp.</td>
<td>Olea europea var.</td>
</tr>
<tr>
<td>Birch species</td>
<td>Olive (fruitless varieties only)</td>
</tr>
<tr>
<td>*Calocedrus decurrens</td>
<td>Phoenix canariensis</td>
</tr>
<tr>
<td>Incense Cedar</td>
<td>Canary Island Date Palm</td>
</tr>
<tr>
<td>Cedrus spp.</td>
<td>Pistacia chinensis</td>
</tr>
<tr>
<td>Cedar species</td>
<td>Chinese Pistache</td>
</tr>
<tr>
<td>Ceratonia siliqua</td>
<td>Magnolia spp.</td>
</tr>
<tr>
<td>Carob</td>
<td>Maytenus boaria</td>
</tr>
<tr>
<td>Cercis Canadensis</td>
<td>Olea europea var.</td>
</tr>
<tr>
<td>Eastern Redbud</td>
<td>Oak (fruitless varieties only)</td>
</tr>
<tr>
<td>*Cercis occidentalis</td>
<td>Phoenix canariensis</td>
</tr>
<tr>
<td>Western Redbud</td>
<td>Crack Willow</td>
</tr>
<tr>
<td>Citrus sp.</td>
<td>Prunus granatum</td>
</tr>
<tr>
<td>Lemon</td>
<td>Pomegranate</td>
</tr>
<tr>
<td>Cordyline spp.</td>
<td>Pyrus calleryana</td>
</tr>
<tr>
<td>Dracaena species</td>
<td>Flowering Pear</td>
</tr>
<tr>
<td>Cornus spp.</td>
<td>*Quercus agrifolia</td>
</tr>
<tr>
<td>Dogwood species</td>
<td>Coast Live Oak</td>
</tr>
<tr>
<td>Cupressus sempervirens</td>
<td>Quercus spp.</td>
</tr>
<tr>
<td>Italian Cypress</td>
<td>Oak species</td>
</tr>
<tr>
<td>Eriobotrya deflexa</td>
<td>Quercus suber</td>
</tr>
<tr>
<td>Bronze Loquat</td>
<td>Cork Oak</td>
</tr>
<tr>
<td>Erythrina crist-galli</td>
<td>Schinus molle</td>
</tr>
<tr>
<td>Cockspur Coral Tree</td>
<td>California PepperTree</td>
</tr>
<tr>
<td>Fagus sylvatica</td>
<td>*Sequoia sempervirens</td>
</tr>
<tr>
<td>European Beech</td>
<td>Coast Redwood</td>
</tr>
<tr>
<td>Ficus carica</td>
<td>*Sequoiadendron giganteum</td>
</tr>
<tr>
<td>Fig</td>
<td>Giant Sequoia</td>
</tr>
<tr>
<td>Fraxinus velutina</td>
<td>Taxus ssp.</td>
</tr>
<tr>
<td>Modesto Ash</td>
<td>Yew species</td>
</tr>
<tr>
<td>Geditsia triacanthos</td>
<td>Thuja ssp.</td>
</tr>
<tr>
<td>Honey Locust</td>
<td>Arborvitae species</td>
</tr>
<tr>
<td>Ginkgo biloba</td>
<td>Tilia sp.</td>
</tr>
<tr>
<td>MaidenhairTree</td>
<td>Linden Tree</td>
</tr>
<tr>
<td>Grevillea robusta</td>
<td>*Umbellularia californica</td>
</tr>
<tr>
<td>Silk Oak</td>
<td>Bay Laurel</td>
</tr>
<tr>
<td>*Heteromeles arbutifolia</td>
<td>Washingtonia robusta</td>
</tr>
<tr>
<td>California Holly</td>
<td>Mexican Fan Palm</td>
</tr>
<tr>
<td>J acaranda mimosifolia</td>
<td>*California Native Plant</td>
</tr>
<tr>
<td>J acaranda</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4.3: Shrub Plant List

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arbutus unedo ‘Compacta’</td>
<td>Strawberry Tree</td>
</tr>
<tr>
<td>*Arctostaphylos ‘Howard McMinn’</td>
<td>Manzanita</td>
</tr>
<tr>
<td>Aucuba japonica ‘Gold Spot’</td>
<td>Japanese Aucuba</td>
</tr>
<tr>
<td>* Baccharis pilularis</td>
<td>Dwarf Coyote Bush</td>
</tr>
<tr>
<td>Berberis sp.</td>
<td>Barberry</td>
</tr>
<tr>
<td>Brugmansia sp.</td>
<td>Angel's Trumpet</td>
</tr>
<tr>
<td>Buxus microphylla japonica</td>
<td>Japanese Boxwood</td>
</tr>
<tr>
<td>* Calycanthus occidentalis</td>
<td>Spice Bush</td>
</tr>
<tr>
<td>* Ceanothus sp.</td>
<td>Ceanothus</td>
</tr>
<tr>
<td>Camellia japonica</td>
<td>Japanese Camellia</td>
</tr>
<tr>
<td>Camellia sasanqua</td>
<td>Camellia</td>
</tr>
<tr>
<td>* Carpenteria californica</td>
<td>Bush Anemone</td>
</tr>
<tr>
<td>Centranthus ruber</td>
<td>Jupiter's Beard</td>
</tr>
<tr>
<td>Choisya ternata</td>
<td>Mexican Orange Blossom</td>
</tr>
<tr>
<td>Cistus sp.</td>
<td>Rockrose species</td>
</tr>
<tr>
<td>Convolvulus cneorum</td>
<td>Bush Morning Glory</td>
</tr>
<tr>
<td>Coprosma kirkii</td>
<td>Creeping Coprosma</td>
</tr>
<tr>
<td>Correa spp.</td>
<td>Australian Correa</td>
</tr>
<tr>
<td>Cotinus coggyria</td>
<td>SmokeTree</td>
</tr>
<tr>
<td>Dendromicon spp.</td>
<td>Bush Poppy</td>
</tr>
<tr>
<td>Dietes vegeta</td>
<td>Fortnight Lily</td>
</tr>
<tr>
<td>Dodenaea viscosa</td>
<td>Hopseed Bush</td>
</tr>
<tr>
<td>Elaeagnus sp.</td>
<td>Silverberry species</td>
</tr>
<tr>
<td>Erica spp.</td>
<td>Heath species</td>
</tr>
<tr>
<td>Escallonia sp.</td>
<td>Escallonia</td>
</tr>
<tr>
<td>Euonymus japonica</td>
<td>Evergreen Euonymus</td>
</tr>
</tbody>
</table>

### Table 4.3: Shrub Plant List (continued)

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euphorbia spp.</td>
<td>Gopher Plant, Crown of Thorns</td>
</tr>
<tr>
<td>Feijoa sellowiana</td>
<td>Pineapple Guava</td>
</tr>
<tr>
<td>Ferns (except Pellaea)</td>
<td>Ferns</td>
</tr>
<tr>
<td>Fuchsia spp.</td>
<td>Fuchsia</td>
</tr>
<tr>
<td>Gardenia jasminoides</td>
<td>Gardenia</td>
</tr>
<tr>
<td>* Garrya elliptica</td>
<td>Coast Silkassel</td>
</tr>
<tr>
<td>* Gaultheria shallon</td>
<td>Salal</td>
</tr>
<tr>
<td>Grevillea spp.</td>
<td>Grevillea species</td>
</tr>
<tr>
<td>Griselinea lucida</td>
<td>Griselinea</td>
</tr>
<tr>
<td>*Heteromeles arbutifolia</td>
<td>Toyon</td>
</tr>
<tr>
<td>Ilex aquifolium</td>
<td>English Holly</td>
</tr>
<tr>
<td>Ilex cornuta 'Burfordii'</td>
<td>Burford Holly</td>
</tr>
<tr>
<td>J uniperus spp.</td>
<td>J uniper species</td>
</tr>
<tr>
<td>Leonotis leonurus</td>
<td>Lion’s Tail</td>
</tr>
<tr>
<td>Ligustrum spp.</td>
<td>Privet species</td>
</tr>
<tr>
<td>Lophomyrtus x ralphii</td>
<td>New Zealand Myrtle</td>
</tr>
<tr>
<td>Loropetalum chinense</td>
<td>Fringe Flower</td>
</tr>
<tr>
<td>* Mahonia aquifolium</td>
<td>Oregon Grape Holly</td>
</tr>
<tr>
<td>* Mimulus spp.</td>
<td>Sticky Monkey Flower</td>
</tr>
<tr>
<td>* Myrica californica ‘Compacta’</td>
<td>Compact Pacific Wax Myrtle</td>
</tr>
<tr>
<td>* Myrica californica</td>
<td>Pacific Wax Myrtle</td>
</tr>
<tr>
<td>Myrtus communis ‘Compacta’</td>
<td>Dwarf Myrtle</td>
</tr>
<tr>
<td>Nandina domestica var.</td>
<td>Heavenly Bamboo varieties</td>
</tr>
<tr>
<td>Nerium oleander</td>
<td>Oleander</td>
</tr>
<tr>
<td>Osmanthus spp.</td>
<td>Sweet Olive species</td>
</tr>
<tr>
<td>Penstemon sp.</td>
<td>Beard Tongue</td>
</tr>
</tbody>
</table>
## Chapter Four: Design Guidelines and Standards

Table 4.3: Shrub Plant List (continued)

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phormium tenax var.</td>
<td>New Zealand Flax varieties</td>
</tr>
<tr>
<td>Pittosporum spp.</td>
<td>Mock Orange, Tobira, Victorian Box, etc.</td>
</tr>
<tr>
<td>Podocarpus spp.</td>
<td>Fern Pine, Yew Pine</td>
</tr>
<tr>
<td>Prunus caroliniana</td>
<td>Carolina Laurel Cherry</td>
</tr>
<tr>
<td>* Rhamnus californica</td>
<td>Coffeeberry</td>
</tr>
<tr>
<td>Rhododendron sp.</td>
<td>Rhododendron (except Azalea)</td>
</tr>
<tr>
<td>* Rhus integrifolia</td>
<td>Lemonade Berry</td>
</tr>
<tr>
<td>* Rhus ovata</td>
<td>Sugar Bush</td>
</tr>
<tr>
<td>* Ribes spp.</td>
<td>Currant, Gooseberry</td>
</tr>
<tr>
<td>Rosmarinus spp.</td>
<td>Rosemary species</td>
</tr>
<tr>
<td>Salvia spp. (odoriferous only)</td>
<td>Sage (heavily scented only)</td>
</tr>
<tr>
<td>Sarcococca ruscifolia</td>
<td>Fragrant Sweet Box</td>
</tr>
<tr>
<td>Sollya heterophylla</td>
<td>Australian Bluebell Creeper</td>
</tr>
<tr>
<td>* Symphorocarpus spp.</td>
<td>Snowberry</td>
</tr>
<tr>
<td>Taxus spp.</td>
<td>Yew species</td>
</tr>
<tr>
<td>Thuja spp.</td>
<td>Arborvitae</td>
</tr>
<tr>
<td>Trachelospermum jasminoides</td>
<td>Star Jasmine</td>
</tr>
<tr>
<td>Teucrium chamaedrys</td>
<td>Coast Rosemary</td>
</tr>
<tr>
<td>Teucrium fruticans</td>
<td>Bush Germander</td>
</tr>
<tr>
<td>Viburnum burkwoodii</td>
<td>Burkwood Viburnum</td>
</tr>
<tr>
<td>Viburnum davidii</td>
<td>David's Viburnum</td>
</tr>
<tr>
<td>Viburnum tinus</td>
<td>Laurustinus</td>
</tr>
<tr>
<td>Westringia rosmariniformis</td>
<td>Bush Rosemary species</td>
</tr>
<tr>
<td>* California Native Plant</td>
<td></td>
</tr>
<tr>
<td>Botanical Name</td>
<td>Common Name</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Acanthus mollis</td>
<td>Bear’s Breech</td>
</tr>
<tr>
<td>Agapanthus spp.</td>
<td>Lily-of-the-Nile species</td>
</tr>
<tr>
<td>Agave americana</td>
<td>Century Plant</td>
</tr>
<tr>
<td>Aloe sp.</td>
<td>Aloe</td>
</tr>
<tr>
<td>Asparagus densiflorus ‘Sprenger’</td>
<td>Sprenger Asparagus</td>
</tr>
<tr>
<td>Bergenia cordifolia</td>
<td>Heartleaf Bergenia</td>
</tr>
<tr>
<td>Buddleja sp.</td>
<td>Butterfly Bush</td>
</tr>
<tr>
<td>Canna sp.</td>
<td>Canna</td>
</tr>
<tr>
<td>Chondropetalum tectorum</td>
<td>Small Cape Rush</td>
</tr>
<tr>
<td>Clivia miniata</td>
<td>Kaffir Lily</td>
</tr>
<tr>
<td>Coleonema pulchellum</td>
<td>Breath of Heaven</td>
</tr>
<tr>
<td>Convolvulus cnerum</td>
<td>Bush Morning Glory</td>
</tr>
<tr>
<td>Erigeron karvinskianus</td>
<td>Santa Barbara Daisy</td>
</tr>
<tr>
<td>Festuca idahoensis</td>
<td>Idaho fescue</td>
</tr>
<tr>
<td>Grasses (ornamental)</td>
<td>Ornamental Grasses</td>
</tr>
<tr>
<td>Hakonechloa macra</td>
<td>Japanese Forest Grass</td>
</tr>
<tr>
<td>Helianthemum mummularium</td>
<td>Sunrose</td>
</tr>
<tr>
<td>Hemerocallis sp.</td>
<td>Daylily</td>
</tr>
<tr>
<td>Iris sp.</td>
<td>Bearded Iris</td>
</tr>
<tr>
<td>* J uncs patens</td>
<td>California Gray * Rush</td>
</tr>
<tr>
<td>* Leymus condensatus</td>
<td>Wild Rye Grass</td>
</tr>
<tr>
<td>Limonium perezi</td>
<td>Statice</td>
</tr>
<tr>
<td>Liriope muscari</td>
<td>Lily Turf</td>
</tr>
<tr>
<td>* Muhlenbergia rigens</td>
<td>Deer Grass</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepaeta spp.</td>
<td>Catnip</td>
</tr>
<tr>
<td>Ophiopogon japonicus</td>
<td>Mondo Grass</td>
</tr>
<tr>
<td>Stachys byzantina</td>
<td>Lamb's Ears</td>
</tr>
<tr>
<td>* Sisyrinchium bellum</td>
<td>Blue-Eyed Grass</td>
</tr>
<tr>
<td>Zaushneria spp.</td>
<td>Fuchsia</td>
</tr>
</tbody>
</table>

**Water Conserving Grasses**

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Festuca rubra</td>
<td>Molate Fescue</td>
</tr>
<tr>
<td>Festuca idahoensis</td>
<td>Idaho Fescue</td>
</tr>
<tr>
<td>Festuca occidentalis</td>
<td>Western Fescue</td>
</tr>
</tbody>
</table>

**Drought Tolerant Grasses**

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Agrostis hallii</td>
<td>Hall’s Bentgrass</td>
</tr>
<tr>
<td>Carex flacca ‘Blue Zinger’</td>
<td>Blue Zinger Sedge</td>
</tr>
<tr>
<td>*Carex divulsa</td>
<td>Berkeley Sedge</td>
</tr>
<tr>
<td>*Carex pansa</td>
<td>California Meadow Sedge</td>
</tr>
<tr>
<td>*Carex praegracilis</td>
<td>Clustered Field Sedge</td>
</tr>
<tr>
<td>Carex testacea</td>
<td>Orange Sedge</td>
</tr>
<tr>
<td>Dymondia margaretae</td>
<td>Silver Carpet</td>
</tr>
<tr>
<td>*Festuca californica</td>
<td>California Fescue</td>
</tr>
<tr>
<td>*Festuca idahoensis</td>
<td>Idaho Blue Fescue</td>
</tr>
<tr>
<td>*Festuca rubra</td>
<td>Red Fescue</td>
</tr>
<tr>
<td>Festuca ‘Siskiyou Blue’</td>
<td>Siskiyou Blue Fescue</td>
</tr>
<tr>
<td>Sesleria autumnalis</td>
<td>Autumn Moorgrass</td>
</tr>
<tr>
<td>*Sisyrinchium bellum</td>
<td>Blue-Eyed Grass</td>
</tr>
<tr>
<td>* California Native Plant</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4.5: Vines

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bougainvillea</td>
<td>Bougainvillea</td>
</tr>
<tr>
<td>Clematis spp.</td>
<td>Clematis species</td>
</tr>
<tr>
<td>Jasminum spp.</td>
<td>Jasmine</td>
</tr>
<tr>
<td>Gelsemium sempervirens</td>
<td>Carolina Jessamine</td>
</tr>
<tr>
<td>Phaedranthus buccinatorius</td>
<td>Blood-Red Trumpet Vine</td>
</tr>
<tr>
<td>Solanum jasminoides</td>
<td>Potato Vine</td>
</tr>
<tr>
<td>Trachelospermum jasminoides</td>
<td>Star Jasmine</td>
</tr>
<tr>
<td>Wisteria spp.</td>
<td>Wisteria species</td>
</tr>
</tbody>
</table>

* California Native Plant

### Table 4.6: Ground Covers

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Arctostaphylos 'Emerald Carpet'</td>
<td>Carpet Manzanita</td>
</tr>
<tr>
<td>*A. uva-ursi 'Wood's Compact'</td>
<td>Wood's Compact Kinnikinnick</td>
</tr>
<tr>
<td>*Baccharis pilularis cvs.</td>
<td>Dwarf Coyote Brush</td>
</tr>
<tr>
<td>*Carex spp.</td>
<td>Sedge</td>
</tr>
<tr>
<td>*Ceanothus griseus horizontalis.</td>
<td>Carmel Creeper</td>
</tr>
<tr>
<td>Cotoneaster dameri ‘Low Fast’</td>
<td>Bearberry Cotoneaster</td>
</tr>
<tr>
<td>Cotoneaster salicifolius ‘Emerald Carpet’</td>
<td>Emerald Carpet Willowleaf Cotoneaster</td>
</tr>
<tr>
<td>Cotoneaster horizontalis</td>
<td>Rock Cotoneaster</td>
</tr>
<tr>
<td>Duchesnea indica</td>
<td>Indian Mock Strawberry</td>
</tr>
<tr>
<td>*Fragaria chiloensis</td>
<td>Beach Strawberry</td>
</tr>
<tr>
<td>Mahonia repens</td>
<td>Creeping Mahonia</td>
</tr>
<tr>
<td>Nepeta sp.</td>
<td>Catnip</td>
</tr>
<tr>
<td>Ophiopogon japonicus</td>
<td>Mondo Grass</td>
</tr>
<tr>
<td>Oxalis spp.</td>
<td>Wood Sorrel</td>
</tr>
<tr>
<td>Rosmarinus prostratus</td>
<td>Creeping Rosemary</td>
</tr>
<tr>
<td>Rhus aculeatus</td>
<td>Butcher’s Broom</td>
</tr>
<tr>
<td>Rubus calcynoides</td>
<td>Bramble</td>
</tr>
<tr>
<td>Teucrium cossonii</td>
<td>Majorcan Germander</td>
</tr>
<tr>
<td>Trachelospermum jasminoides</td>
<td>Star Jasmine</td>
</tr>
</tbody>
</table>

* California Native Plant
Plant Selection Guidelines

The preceding plant palette is a compilation of plants known to perform well in the Moraga climate. This list serves to provide designers with a basic list of plant from which to chose but not intended to be the only plants from which a designer may select.

- Choose plants that will grow to their natural size and form and fit comfortably in allotted space without severe pruning.
- Understand the solar and view implications of placing deciduous and evergreen trees in front of windows.
- Select trees that produce little to no litter if placed near plazas and courtyards or will grow over roofs. Consider leaf removal strategies.
- Where trees are planned near walkways and other paved surfaces, select species with non-invasive roots.
- Coordinate plant selection with architecture, lighting, signage and utilities (above and below grade).

PLANT MAINTENANCE GUIDELINES

- Allow plants to grow to their natural size and form and fit comfortably in allotted space without sheering and shaping.
- Plants shall be maintained to grow without sheering, unless noted by the project specific landscape architect. For example, a designer may envision a sheered formal hedge in a particular location and select a plant that will yield such effect, but those individuals performing landscape maintenance shall not interpret that to mean all plants on campus may be sheered into unnatural plant shapes. The trees and shrubs shown on this page represent examples of unacceptable pruning methods.
- In order to maintain the health of campus flora, all plants must receive regular quality attention. This effort will pay back with longer-lived and healthier specimens with a lower replacement rate. Trees and shrubs should be inspected for pruning needs. Training can consist of familiarity with an acceptable technical manual.
such as: http://ceventura.ucanr.edu/Environmental_Horticulture/Landscape/Pruning/#

• Apply only enough water to maintain healthy plants.

**TRADITIONAL GRASS GUIDELINES**

• Traditional grass requires biweekly mowing and is the highest water use plant type on campus.

• Traditional grass shall only be planted where functional uses require it, such as a venue for ceremonies, overflow dining, overflow parking, recreation areas near dormitories, etc.

• The grass lawn shown in the photo is too small to be functional and should be replaced with a drought-tolerant lawn substitute.

**PLANT LIST SUBMITTALS**

• Landscape architects shall specify contractors to provide a list of plants actually planted on each project. The list shall include genus and species of each plant, including trees, shrubs, vines, ground covers and turf. This list shall be submitted to the Director of Facilities and the project landscape architect prior to project closeout.

**MULCH UNDER OAK TREES**

• Native oak leaves, 2”-3” deep

Small, unused grassy areas like this one should be replaced with drought-tolerant substitutes or other landscaping
Irrigation

A properly designed, managed and maintained irrigation system is essential for healthy and functional landscapes, while conserving water. Irrigation systems shall be designed to provide the minimum volume of water to plants to ensure healthy growth and maintenance without overspray or runoff onto adjacent non-planted areas.

IRRIGATION SYSTEM CRITERIA

The following system criteria shall be designed and installed:

- Weather based irrigation system.
- Rain sensor with program override shut off.
- Remote control valves shall be placed in black plastic valve boxes with black plastic bolt-down lids.
- Contractor shall provide:
  - As-built drawings indicating all equipment and piping.
  - Two keys for each controller.
  - Written irrigation program indicating irrigation zone number which corresponds to that on the Irrigation Plan; irrigation zone description; and programmed watering days and durations.

Irrigation Equipment

Standardizing equipment will streamline maintenance costs and repairs by reducing maintenance parts inventory and promoting familiarity with minimal appurtenances on campus.
Saint Mary’s College has an established campus sign standard. The signage standards provide the design intent for all campus signing including:

- Wayfinding
- Building Naming
- Building Addressing
- Street Signs
- Packing Identification

The family of sign types demonstrated in this package represent the types of signs on the campus. The design corresponds to the architecture and campus style. They provide a cohesive and comprehensive sign system that can be implemented and updated over time.

- Vehicular Directional
- Building Identification
- Building Addresses
- Street Signs
- Pedestrian Directional and Wayfinding
- Parking Identification
Multiple examples of new signage
Sustainable stormwater management seeks to mimic natural or predevelopment site hydrology, improve runoff quality and provide green space in urban environments. The following section provides guidance and recommendations for how the College can reduce the negative stormwater runoff impacts associated with new development and impervious surfaces. These are intended to assist the College by identifying opportunities to incorporate sustainable stormwater management practices into existing and future projects. These design features will contribute to the College’s goals for increased environmental sustainability, increased green space and reduced costs associated with stormwater runoff.

**General**

Stormwater runoff is the leading source of pollutants for water bodies that fail to meet water quality standards. The State Regional Water Board issued a Municipal Regional Stormwater Permit to the Contra Costa Clean Water Program. The permit includes prescriptive requirements for stormwater under Provision C.3. This provision is a comprehensive program to:

- Design sites to minimize imperviousness, detain runoff and infiltrate, reuse, or evapotranspirate runoff where feasible;
- Cover or control sources of stormwater pollutants;
- Treat runoff prior to discharge from the site;
- Ensure runoff does not exceed pre-project peaks and durations; and
- Maintain treatment and flow-control facilities.
All projects are required to conform to the Contra Costa Cleanwater Program Stormwater C.3 Guidebook, latest edition (http://www.cccleanwater.org). The objectives of this Guidebook are to:

- Prevent stormwater pollution
- Protect and enhance water quality in creeks and wetlands
- Preserve beneficial uses of local waterways
- Comply with State and Federal regulations
- Increase localized ground water infiltration through storm water Best Management Practices (BMPs)

Low Impact Development (LID) features are implemented to reduce water quality impacts by preserving and re-creating natural landscape features, minimizing imperviousness and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source onsite. Examples of stormwater treatment controls/LID techniques are seen in:

- Bioretention/rain garden areas
- Flow-through planter boxes
- Vegetated buffer strips
- Infiltration trenches
- Green roofs
- Green streets
- Permeable pavements
- Dry wells and infiltration basins, as soil permeability will allow
- Rainwater harvesting/cisterns and reuse

**GUIDELINES**

- Require all projects to include a Drainage Area Map and Hydrology/Hydraulics to size new storm pipelines. Calculations will follow all Contra Costa County Flood Control and Water Conservation Area and Town of Moraga standards.
- Implement a Stormwater Control Plan to identify, integrate and properly size stormwater management facilities (for both treatment and flow-control).
Chapter Four: Design Guidelines and Standards

- Implement an Operation and Maintenance practices to assure the long-term care and operation aspects of all LID facilities.

- Encourage planting selection for LID to meet local guidelines that include drought tolerance, adaptation to well-drained soils, adaptation to low soil fertility, are not invasive and do not have aggressive roots.

- Use irrigation systems that minimize water use and can be controlled to prevent overwatering and excess flow during dry weather.

- Keep plantings healthy without the use of conventional fertilizers and pesticides.

- Implement pest management using natural and non-toxic pesticides. Weed control should include manual methods, soil amendments and non-toxic herbicides.

Site Design

In order to properly integrate stormwater management measures into a project, increase functionality, approve appearance and minimize impacts to the College, Low Impact Development (LID) designs should be considered early on in the planning and site development process.

- LID elements should be incorporated on individual sites and building setback zones as well as within the streets and parking areas. Where possible, install landscaped stormwater planters near sidewalks, buildings, plazas and other hardscape areas.

- Use new open spaces as opportunities for stormwater detention and infiltration.

- Encourage the use of permeable pavers or tree grates around tree wells instead of impervious materials in or to increase the infiltration of stormwater runoff.

- Consider the use of permeable pavers, in-ground planters and swales, or other LID treatment and detention/retention facilities as an opportunity for interpretive or educational signage.
• Incorporate localized rainwater harvesting (cistern) for onsite landscape irrigation water demands (such as field or landscape irrigation), when feasible.

• Choose a previously developed site for new construction and building additions. Sites selection should be maintained within the core campus area.

• Consider using a bioretention/LID facility in series with a vault to meet both stormwater treatment and flow control requirements.

• Consider treatment of an existing impervious area as a trade-off treatment area for a new impervious area.

• Include source controls:
  • Mark all storm inlets “No Dumping, Flows to Bay.”
  • Plumb interior parking garage floor drains to the sanitary sewer.
  • Limit landscape fertilizers and pesticide use.
  • Plumb pools, ponds and water features to the sanitary sewer.
  • Refuse areas and loading docks to be covered and graded to drain to prevent run-on or runoff. All drains must connect to a grease removal device before discharging to a sanitary sewer.
  • Cover, berm and plumb all vehicle and equipment cleaning areas to drain to the sanitary sewer.
  • Prevent rooftop equipment, condensate lines and sumps from connecting to storm drain lines.
  • Sweep all plazas and sidewalks.
  • Collect litter.

• Include multiple approaches to site design and stormwater management. Include LID treatment measures, self-retaining areas (these areas retain first inch of rainfall without producing runoff), self-treating areas (landscape/turf drain directly offsite or storm drain system), and draining to self-retaining areas (1:1 ratio of hardscape to landscape for treatment and 2:1 ratio for flow-control).
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Grading

The National Pollutant Discharge Elimination System (NPDES) was established by the Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm sewer systems (MS4s). These permits generally identify effluent and receiving water limits on allowable concentrations of pollutants contained in discharges, prohibitions on discharges not specifically allowed under the permit, and provisions that describe required actions by the discharger including pollution prevention, self-monitoring and other activities.

Discharge of stormwater runoff from construction projects that disturb one or more acres (including smaller sites in a larger common plan of development or sale) requires coverage under the statewide General Construction Stormwater Permit and implementation of a Storm Water Pollution Prevention Plan (SWPPP).

GUIDELINES

- Employ Erosion Control and Sediment Entrapment features during construction.
- Protect LID facilities from erosion until plants have been installed and established. Consider mulch application, jute netting, and soil binders.
- Control dust during all constructions operations.
- Follow NPDES Stormwater Pollution Prevention Plan requirements (implementation measures, inspections and reporting).
- All grading should be accomplished in conformance with the geotechnical report prepared for the College. Consider slopes 3:1 or less to prevent erosion and enhance soil stability.
- Collect top soil and store onsite for re-use in landscaping.
Streets and Paved Areas

New, removed and replaced impervious areas such as streets, parking areas, and pedestrian hardscape areas require stormwater management and treatment. Stormwater impact can be minimized by configuring these areas to reduce the apparent mass of hard surfaces, such as reducing parking stalls/drive aisle dimensions.

GUIDELINES

- Incorporate stormwater treatment at the perimeter landscape areas of parking lots and where planter islands divide the parking field.

- Integrate Green Streets LID water quality treatment and detention within the street footprint (using bulb-outs and along sidewalk edges) to collect the street runoff into adjacent swales or in-ground treatment areas.

- Slope pavement toward bioretention areas. Cut or flush curbs are encouraged to connect impervious surfaces to bioretention areas.

- Provide shade from tree canopies on paved surfaces.

- Maximize high albedo or reflective paving.

- Integrate permeable/pervious pavements into parking areas. Pervious pavements are designed to transmit rainfall through the surface to storage in a base course. This base course infiltrates to soils over time (with clay soils increase base course depth and incorporate subdrains). Examples of pervious pavements:
  - Pervious concrete
  - Pervious asphalt
  - Porous pavers
  - Crushed aggregate/gravel
  - Open pavers with grass or plantings
  - Open pavers with gravel
  - Artificial turf

- All vehicle paving should meet proper structural standards per applicable codes and as recommended by the project geotechnical engineer.

- Use local materials, when possible.
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Existing Water Bodies & Wetland Areas

The College is fortunate to have two creeks within its boundary: Laguna Creek and Las Trampas Creek. The creeks provide natural open space and amenities. Several minor swales feed into these creeks. These resources should be enhanced and strengthened. The natural character of the creeks and swales should be reinforced by using native species and maintaining appropriate setbacks to protect and encourage natural habitats. Sustainable stormwater management practices will preserve and enhance the unique resources, water quality and beneficial uses associated with the existing creeks and wetlands (wildlife habitat and riparian vegetation) while incorporating them as an environmentally sustainable feature of the campus.

GUIDELINES

- Locate utilities and other improvements so they do not interfere visually or physically.
- Consider pedestrian and bicycle access adjacent to the creeks and waterways using natural and permeable materials that minimize runoff and pollutants.
- Provide planting buffers between paved areas and the open space/natural habitat.
Chapter Four: Design Guidelines and Standards

Noise Standards

The College manages noise on campus using a number of approaches. Generally, hours of academic and athletic activity at the campus are 8:00am to 10:00pm; seven days a week. However, the campus operates 24/7 due to on-campus housing. During construction periods, construction will occur between 8:00 AM and 5:00 PM, Mondays through Fridays, and by permitted exception in accordance with the Town of Moraga.

The College maintains quiet hours in residence halls in order to facilitate student study and rest. Quiet hours are in effect from 9:00 p.m. to 9:00 a.m. Sunday through Thursday, and from midnight to 9:00 a.m. Friday and Saturday. During quiet hours, noise from stereos, radios, TVs, voices or any other identifiable source should not be heard outside of or between any residence hall rooms. These quiet hours do not apply to non-residential buildings or open spaces.

The College has also entered into an operation agreement with the Town of Moraga that relates to the Garaventa Intramural Fields adjacent to Saint Mary’s Road. This agreement does not relate to other facilities.