



Travis Air Force Base

Facilities Excellence Guide

*Embracing Mission,
Community and Sustainability*



**Travis Air Force Base
Facilities Excellence Guide
2008 edition**

prepared by:



**Travis Air Force Base
Architectural Compatibility Plan
2004 edition**

prepared by:

Fennell Group





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Vision and Goals

Vision

As our mission and process change over time, Travis Air Force Base (AFB) will continue to adapt and grow. The design of new and renovated facilities at Travis AFB shall incorporate the following objectives:

- to support the mission
- to function efficiently to the maximum extent
- to be sustainable and minimize impact to the environment
- to enhance morale by providing high design standards for the work environment
- to provide a sense of community for the military and civilian personnel

How to use this guide

This document maps out the Vision for future facility and urban development at Travis AFB. It is intended to be used by program managers, project managers, and designers to plan and execute projects to support the objectives described herein. The Facilities Excellence Guide (FEG) is developed in parallel with Travis AFB's General Plan and they are intended to supplement each other. The FEG updates and incorporates the Travis Architectural Compatibility Plan published in 2004. It references other government publications and industry standards for specific requirements such as the Uniform Federal Criteria (UFC), and the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system. This document is available from the Base Civil Engineering office.



URBAN DESIGN GOALS

As Travis AFB grows to take on additional new missions, the urban design of the base shall adapt and mature with the changes. The highest priority is to remain functionally organized and efficient. Appropriate land use will be governed by the General Plan. The General Plan dictates how each area of the base is to be used.

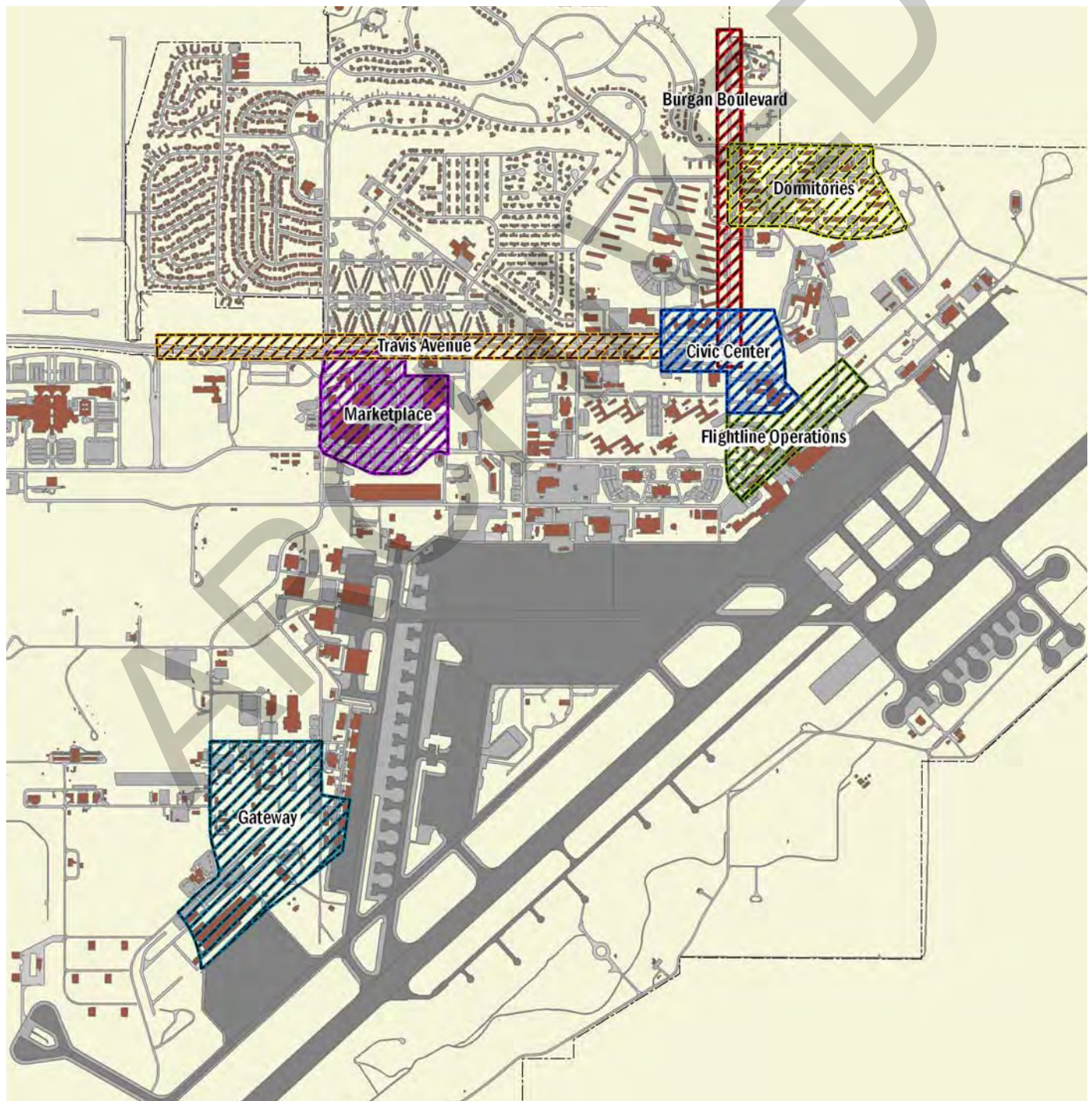
From an urban design perspective, each area or neighborhood of the base shall have urban characters that are appropriate and supportive of the intended uses in that area.

These areas are intended to be unique districts with differing circulation, architectural form and landscape treatment. At the same time, the base shall be visually cohesive. The identity of the districts or areas stems from the collective treatment of each facility which should define their role in supporting the overall mission. The cohesiveness will spring from the commonality of the native environment, sustainability, and mission.

This edition of the FEG will start to define the characters of these districts by highlighting

some of these as focus areas. Future editions of the FEG may address other districts as need arises.

In addition to design standards, this guide outlines an urban design overview of five focus areas and two circulation paths. The intention is to illustrate the desired character of these areas. Further definition of urban characteristics by individual designers is encouraged. The goal is to create a vibrant environment with a deep and authentic sense of place.



Basewide Design Guideline

ARCHITECTURE GOALS

Identity. Improve the quality of the built environment and develop a greater sense of architectural identity at Travis AFB

Functionality. Encourage expression of building function and mission while maintaining a consistent context

Innovation. Encourage expression of technology and incorporation of climate responsive elements into facility design

Relevance. Encourage reference to historical, heritage and cultural resources

Design. Encourage unique building design where appropriate in focus areas

Maintainability. Encourage design consideration for maintenance needs

Design Implementation

- In the past, the Architectural Compatibility Plan (ACP) has been referred to for guidance on exterior architecture consistency and compatibility. The ACP has been incorporated into this FEG and updated to reflect changing needs.
- Designers are encouraged to explore innovative solutions utilizing the latest technology available while achieving a balance between current Air Force Guidance and Standards, budget constraints, site conditions, and user requirements.
- A number of architectural elements have been identified as particularly relevant and are highlighted below:
- Incorporate Basewide Architectural Guidelines to the extent possible for all new buildings, except for Focus Areas, David Grant Medical Center Area, and Housing Areas. Emphasize these elements to create a greater sense of identity unique to Travis AFB.
- For Focus Areas, incorporate elements from the Focus Area Accent Palette in addition to the Basewide Architectural Guidelines to create strong designs and visual interest.
- For the David Grant Medical Center Area, all elements of the Basewide Architectural Guidelines shall apply with the exception of color and form. Color and form shall be compatible with existing buildings in this area.
- For the housing area, the architectural design shall conform to specific guidelines to be determined for each development.

Basewide Architectural Guidelines

The following are the most important elements of the Travis Architectural Design Guideline:

- Terra Cotta color standing seam hip roof
- 4:12 sloped hip roof
- Beige stucco or EIFS wall
- Dark bronze storefront and window frames with double glazed bronze tinted glass.
- Climate responsive features:
 - Deep overhangs for shading
 - Covered walkways or arcade
 - Shading device over windows and doors
 - Light shelves for reflecting natural light into interior space
 - Wind screening at building entry
 - Trellis over outdoor seating spaces
- Incorporate and highlight Travis Base Identity in building design

Focus Area Accent Features

All new buildings in focus areas will require design review and approval by the Architectural Compatibility Review Board (ACRB). The following can be used in Focus Areas to create the desired urban character:

- Alternate roof forms:
 - Hip roof
 - Barrel roof
 - Single slope
- 3:12 to 5:12 roof slope
- Limited use of unique roof shape and slope may be allowed where appropriate. For example, small flat roof areas may be allowed for access to rooftop equipment where maintenance is required, such as with solar panels
- Stone veneer, masonry and ceramic tile are allowed for exterior walls.
- Limited use of concrete, glass and metallic wall surface may be acceptable.
- Alternate wall and accent colors are allowed. (see Appendix A for Color Palette)



LANDSCAPE ARCHITECTURE GOALS

Conservation. Reduce water use.

Maintenance. Reduce maintenance requirements such as pruning, trimming, mowing, weeding, and mulching. Considerations should be given to dropping of seeds and resin, fragile tree limbs and other maintenance concerns. Longevity and disease resistance are also key considerations.

Ecology. Create an overall basewide landscape image that is unique to Northern California and emphasizes the native natural setting of Travis Air Force Base. Eliminate the use of potentially invasive species. Consider landscape design as an extension of the local ecosystem. Provide habitat for the preservation of indigenous species.

Context. Promote landscape design that relates to the facility and relates to the neighborhood. Where appropriate, create outdoor places with landscape design in addition to enhancing building improvements.

Basewide Planting Palette (Appendix B)

Plants in the Basewide Planting Palette have been selected to meet the landscape architecture goals. Plants native to the local environment are preferred. Plants that grow well in the local condition are also allowed. In addition to the plant list, consistent application is desired in order to achieve a unified effect. Desired planting combination and patterns are also included in Appendix B.

Focus Areas Planting Palette (Appendix C)

In addition to the Basewide Planting Palette, the Focus Areas Planting Palette allows for a greater range of plants that might be appropriate for specific neighborhoods.



SUSTAINABLE DESIGN AND ENERGY EFFICIENCY GOALS

All projects shall achieve sustainability and energy efficiency to the maximum extent possible as defined by Presidential Executive Order 13423.

All new construction projects shall be at least LEED Silver certifiable as defined by the USGBC. Major renovation projects shall also meet this goal.

Certain aspects of energy efficiency and LEED sustainability are especially relevant to Travis AFB and designers are encouraged to incorporate these elements into facility design:

Climate Responsive Design

- Solar orientation
- Solar gain control
- Passive solar design
- Daylighting
- Shading for outdoor spaces

Water Use Reduction

- Use low flow fixtures
- Use smart or Computer Controlled and monitored irrigation systems where feasible
- Eliminate permanent landscape irrigation or use high efficiency systems
- Use of reclaimed water for irrigation where possible

Energy Use Reduction

- Use of EMCS to monitor and control energy use within facilities
- Use of high efficiency equipment and fixtures
- Provide sensor and controls to reduce unnecessary use

Renewable Energy

- Incorporate solar panels into architectural design where cost effective and appropriate
- Solar panel arrays shall be arranged in an aesthetically pleasing manner
- Where appropriate, arrange solar panels in roof wells where they are accessible for maintenance



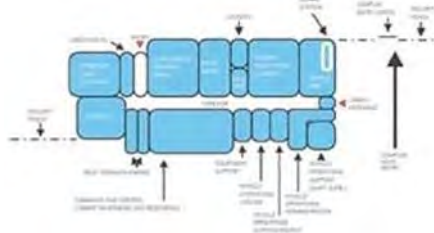
Basewide Design Guideline

SITING

Proper siting, orientation and configuration of a building are the most important design decisions and have the greatest impact to the quality of the building project. The following are key factors to consider:

Sustainable Design

- Orient buildings to take advantage of summer shading and winter passive solar heating.
- Maximize natural lighting while controlling solar gain.
- Orient windows, decks and balconies to utilize natural breeze.



Site Factors

- Consider prevailing wind direction; locate building entrances in protected area if possible.
- Consider views to natural scenery.
- Consider vehicular and pedestrian circulation to and from the facility.
- Provide access to outdoor space and natural areas.

ATFP/Security

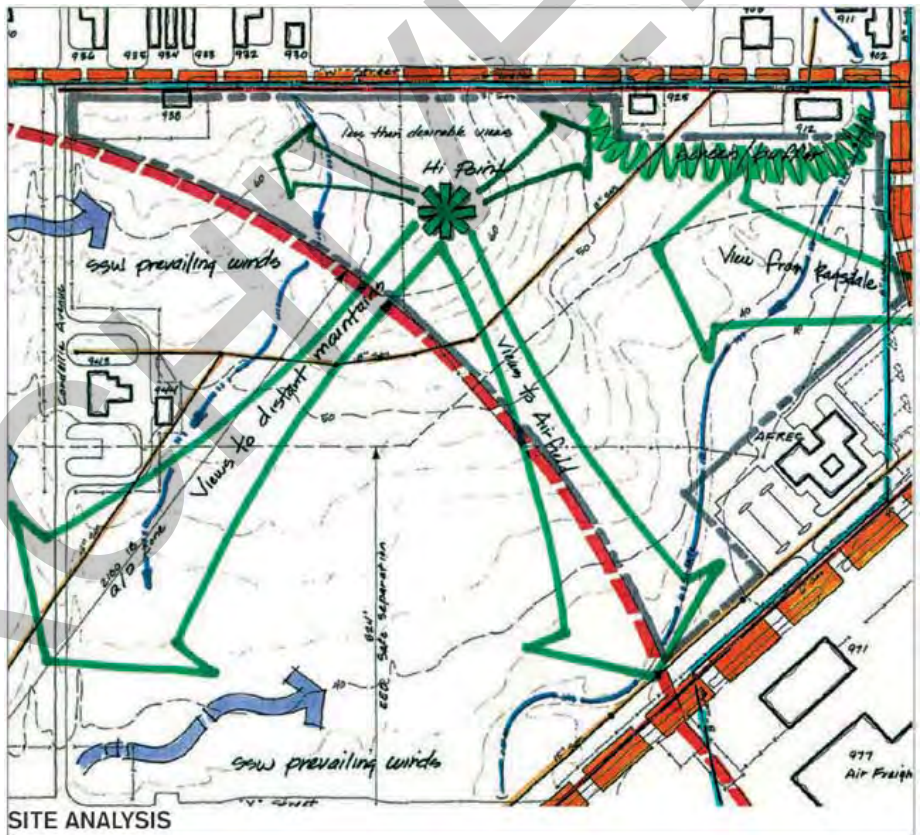
- Plan facility to accommodate standoff distance for present and future projects.
- Determine if vehicular barrier is required. If it is, plan for establishment of a larger protected area with adjacent facility with same requirements.
- Consider visibility from surrounding streets to allow for security patrol.

Building Function

- Orient service side of the facility away from main roads and streets.
- Consider noise, light, traffic and other impact generated by the facility to surrounding areas and facilities.
- Consider desired sightline for the facility mission, such as a view of the flightline.
- Provide for necessary adjacency to other facilities.

Utilities

- Consider existing utilities and available points of connection. Minimize relocation of utilities where possible. When site utilities modification is required, consider future demands and routing.





BUILDINGS

Style / Form

- Place buildings at grade and express main entrance and related features as an architectural feature.
- Rectangular elements are the standard for major building masses. In general, use clean, simple and contemporary forms.
- Use articulation in walls where it is appropriate for human scale.
- Emphasize horizontal proportions.
- Develop a strong relationship of buildings and exterior spaces.

Scale / Massing

- Reduce the monumental appearance of large structures by developing smaller “submassing” components.
- Combine functions whenever possible to avoid proliferation of small independent structures.
- Break up the mass of large structures or reduce plan dimensions to reduce roof volume in low height buildings.

Color

- See Appendix A for Base Color Palette.
- Focus Areas may allow for use of additional colors. See Appendix A for approved wall and accent colors in Focus Areas. In addition to the approved colors, other colors for walls, accents and trim may be used in Focus Areas, subject to approval by the ACRB.

Existing Buildings

- Match the existing materials for addition/alteration projects unless a significant change to the exterior envelope is included.
- Whenever possible bring existing facilities into compliance.

WALL SYSTEMS

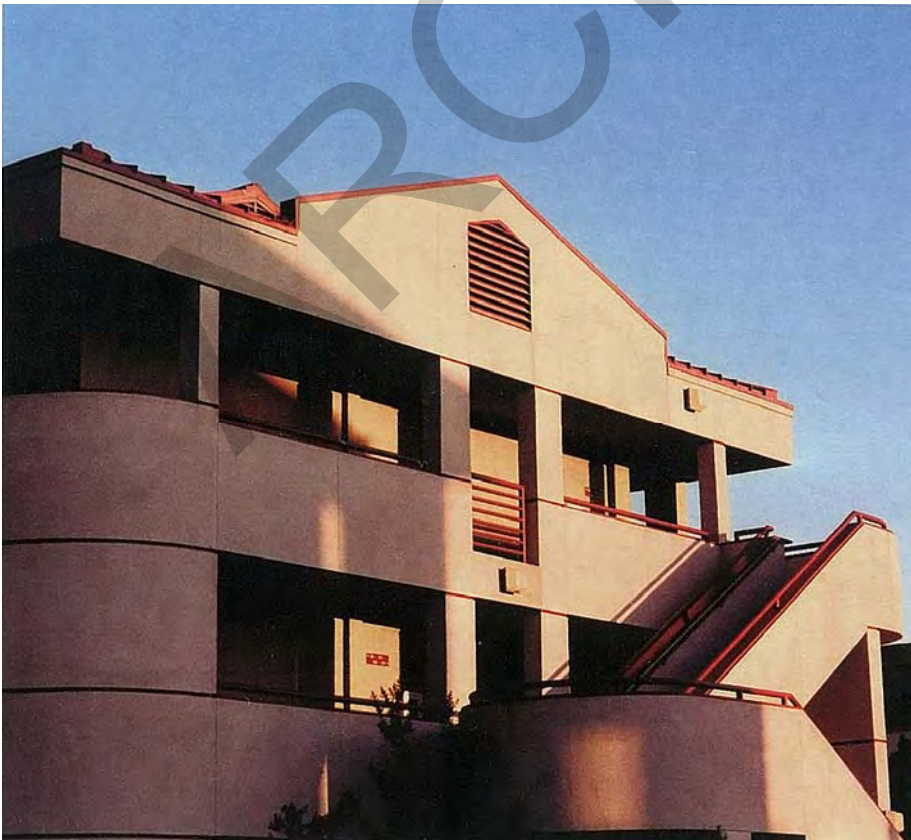
Stucco

- Use integral colored, sand finish, three-coat cement-based stucco system.
- Locate expansion and contraction joints behind downspouts or at transitions in the wall such as at pilasters or reveals.
- Protect stucco from being damaged by lawn maintenance equipment.
- Precast concrete and split face concrete masonry blocks at base of walls are acceptable.

Alternate Wall Material

- Split face tan color concrete masonry unit (CMU)
- Exterior Insulation Finish System (EIFS) is acceptable for wall surfaces four feet or higher above grade.
- EIFS coated pre-insulated metal panels is an acceptable alternate in utilitarian and industrial facilities
- Precast concrete and split face block at base of walls are acceptable
- Use of EIFS at columns is discouraged and prohibited for use at pedestals of columns





Other Materials

- Limit the use of pre-finished metal wall panels to large industrial/flightline facilities and special applications only with ACRB approval.
- Factory finish all exposed metals with a powder-coat application such as Kynar-500.
- Joint sealants shall match the color of the darker adjacent surfaces. When adjacent surfaces are the same color, use a joint sealant in the same color.
- Translucent panels such as Kalwall are an acceptable material for limited use in building façades with ACRB approval. Use Kalwall Crystal panels with Bronze color finish on frames or equal product.

Accents/Detailing

- Detailing shall consider overall building height and proportion.
- Use accents such as medallions, stucco joints, and projected bases to highlight entries and façades.
- High-visibility facilities shall have greater emphasis on detailing and articulation.

Wall Components

- Incorporate placement of all mechanical, electrical, lighting, communication and other building components, including downspouts, into the overall architectural design.
- Conceal all conduits, cables, piping and other utilitarian items.
- All gas meters, alarms, vents, louvers, and electrical/communication boxes shall match the wall surface color on which the equipment is mounted.

ROOF SYSTEMS

Configuration

- Use 4:12 roof slope wherever possible. Roof slopes from 3:12 to 5:12 are acceptable alternate if approved by the ACRB.
- Hipped roofs are preferred for most buildings. Gable and Dutch-hip roofs are acceptable if approved by the ACRB.
- Open gabled elements may be used to accent entries.
- Low-sloped roofs are only allowed for larger structures in combination with hipped roofs, or to match existing conditions on alteration projects.
- Flat roof with mansard parapet is acceptable for renovation projects and new construction if approved by the ACRB and Base Civil Engineer.
- Solar panels on roofs are encouraged where appropriate.
- Make use of daylight harvesting where feasible.

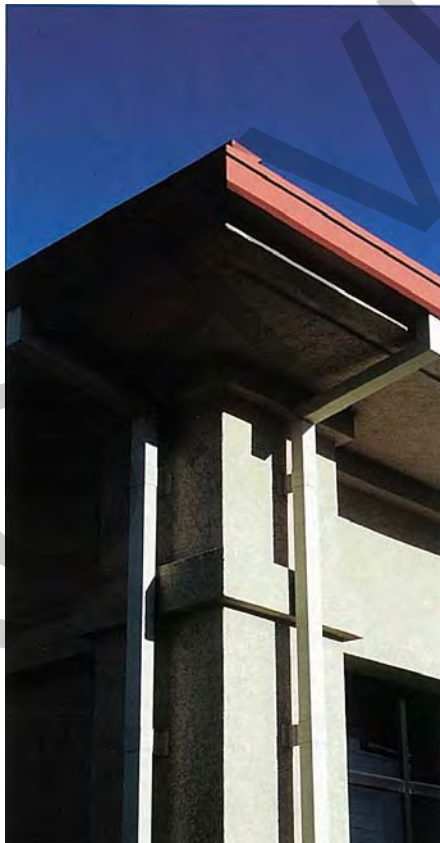
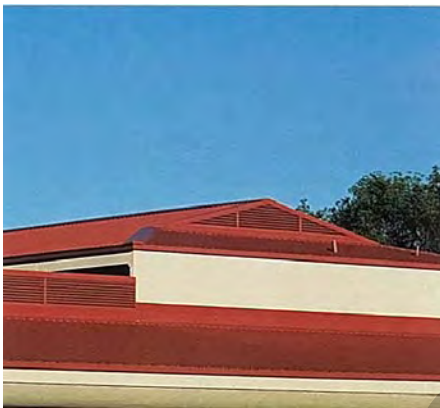
Materials and Color

- Use factory-finished, mechanically seamed, standing seam metal roofing on sloped roofs with an 18-inch maximum wide panel, 22 gauge minimum thickness and a 2-inch raised standing seam.
- Metal roofing shall be terra cotta color and flashing shall match the roof material and color.
- Membrane roofing for low sloped roofs may only be used with ACRB approval. Minimum slope is $\frac{1}{2}$:12. All low slope roofs lower than 3:12 will require a 20-year warranty.
- Use cool roof coating on roof surface wherever possible to meet LEED criteria.

Parapets / Copings

- Sloped parapets on the gabled end walls shall match the roof slope.
- Use factory finished metal copings on all parapet walls. Architectural precast copings may be used with approval of the ACRB. Color shall match adjacent wall color.





Alternate Materials

- Insulated, mechanically seamed, standing seam roof panel system may be used for large flightline or industrial facilities. If used, system shall have seam/ribs at 30 inch spacing maximum.

Fascias, Gutters and Downspouts

- Incorporate continuous metal fascias that are scaled to match the roof. Size them 8 inches minimum and 14 inches maximum in height.
- Avoid the use of turn-down standing seam metal fascias.
- Fascias shall match the roof color when used with metal roofing.
- Gutters on sloped roofs are encouraged and shall be factory finished to match the roof color.
- Integrate downspouts with architectural details and match their color with that of adjacent wall surfaces.
- Limit the use of angle rain water leaders to the extent possible.
- Use underground drainage where possible. At a minimum, provide concrete splash blocks to carry water away from foundations.
- Interior roof drains and open scuppers are allowed only with ACRB approval.

Roof Vents and Elements

- Minimize, consolidate, and organize roof penetrations on the least visible side of the building.
- Paint vent pipes and other roof elements to match the roof color.
- Do not use rooftop mechanical units. When required, minimize the negative visual effects with screening to match the roof color.
- Consider the use of dormer vents to conceal and screen exhaust fans. Do not place dormers arbitrarily.
- Make mechanical vent sizes and shapes consistent with architectural elements.
- Avoid roof-mounted antennas.

ENTRANCES

General

- Ensure the building entrance is clearly visible and highlighted as a prominent feature.
- Projected entrance features with gabled or hipped roof forms are preferred.
- Create enclosed vestibules and weather-protected transition spaces at entrances.
- Address wind screening with walls, landscaping, and the configuration of the entrances.
- Integrate handicapped ramps into design where required. Entrances shall be ADA accessible.

Primary Entrances

- Provide overhead enclosure for weather protection.
- Locate newspaper, vending machines, and similar elements out of view to avoid visual clutter.

Secondary Entrances

- Reflect the character of the primary entrances but less prominently.
- Recessed entries are acceptable to provide areas of shade and weather protection.

Service Entrances and Emergency Egress

- Minimize visual impact with proper siting and access.
- Provide unobtrusive service entrances that are physically and visually separated from primary and secondary entrances.
- Incorporate egress structures, such as stair towers, into design.
- Use landscaping and screen walls to separate loading docks visually.
- Do not use canopies at emergency egress doorways.

Arcades

- Arcade elements may be used as an extension of the building's entrance.
- Integrate arcades with the building's form, materials, and detailing.

Drop-offs and Porte-cocheres

- Limit to special, high profile facilities and embellish with architectural detailing and landscaping.

- Design as an integral part of the building entrance using the same style, form, and materials.

Handrails

- Handrails shall be finished with a dark brown powder-coated surface.
- Integrate handrail designs with the facility design.

Plazas and Courtyards

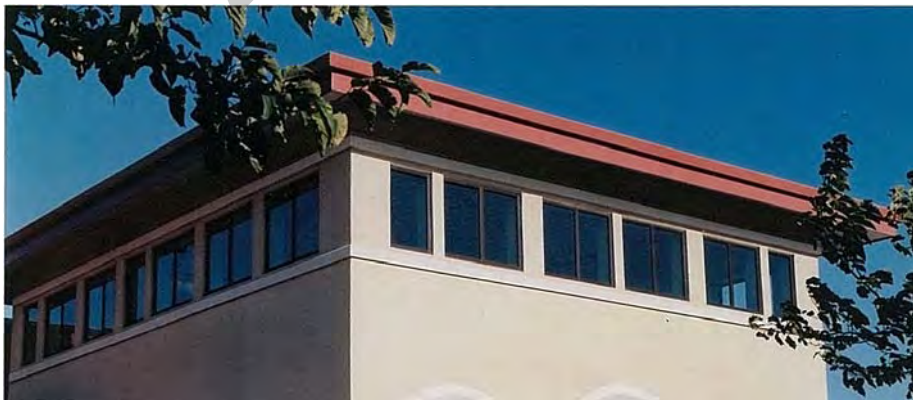
- The use of plazas and courtyards is encouraged at primary and secondary entries.
- Use concrete surfacing with special joint patterns and/or brick or terra cotta colored stamped concrete paver accents. Quarry tile may be used with ACRB approval.
- Incorporate landscaping and lighting into the design.



WINDOWS AND DOORS

Openings

- Use window type, size, placement and mullion pattern to emphasize the overall architectural design.
- Coordinate window and door placement horizontally and vertically.
- Set windows back at least 4 inches from the building façade.
- Use operable windows with screens where possible.



- Transom windows are encouraged.
- Provide shading and lighting devices to minimize solar gain and maximize interior lighting. (e.g., light shelves)

Doors and Frames

- For exterior doors requiring glazing, use dark bronze aluminum storefront systems with thermal-break construction.
- Hardware shall be of same color.
- All secondary-use and service doors and frames shall be painted to match adjacent wall color.
- Limit hollow metal frames to security doors and utility rooms matching wall color.
- Sealants applied adjacent to windows and doors shall match the frame color.
- Solid exterior doors shall be of steel construction, factory primed, field painted, with stainless steel hinges and brushed chrome hardware.
- Consider wind loading and direction when designing exterior entry and service doors.

Glazing

- Use bronze tinted, dual-pane insulated glass.
- Avoid mirrored, spandrel, and plastic glazing. Glass block may be used with ACRB approval.
- Translucent insulated panels are acceptable. Use Kalwall Crystal panels with Bronze color finish on frames or equal product.

Clerestories and Skylights

- Develop clerestories or low-profile skylights integrally with the building design.
- Match clerestory window frames with the general facility window frame color.
- Use tubular skylights to maximize natural lighting.

Security Screens

- Electronic security systems or security glazing are preferred over physical screens or bars.
- Where physical barriers are required, develop simple rectangular designs that are unobtrusive.

ANCILLARY STRUCTURES

General

- Construct structures using stucco piers and hipped standing seam metal roofing.
- Aluminum storefront system may be used for wind protection where needed.
- Coordinate the siting of all ancillary structures with each other and adjacent buildings.
- Use non-weathering, corrosion-resistant materials.
- Accent structures with landscape design, brick pavers or scored pavement patterns.
- Locate kiosks at high-use areas such as shopping, housing, and recreation areas.
- Do not use temporary buildings.
- Minimize the use and number of storage buildings and consolidate in low-visibility areas.



Pavilions

- Centrally locate pavilions between several facilities to create multipurpose use.
- Use manufactured pavilions only in low-visibility locations.
- Wood and premanufactured gazebos are not allowed.
- Bike storage pavilions should match the materials of the adjacent facility.
- Do not use enclosed bike storage lockers.

Trellises and Arbors

- Incorporate trellises into the design of high-visibility facilities to create areas of shade and interest.
- Construct trellises of low maintenance materials such as recycled plastic lumber.
- Integrate with building design/style and entry plazas or outdoor spaces.
- Use commercial/ non-residential style and detailing.
- Incorporate espalier or other landscape materials in the design.

Covered Storage

- Paint steel frame to match building color. Roof shall be terra cotta.



SCREENS AND ENCLOSURES

General

- Where possible, use landscaping instead of walls for screening.
- Use landscaping to soften walls and fences and to screen dumpsters.
- Ribbed CMU is the standard block texture for screens and enclosures. Perforated metal screening may be used for appropriate locations.
- Locate utility components in the least visible area with adequate access to minimize the need for screening.
- Ensure screens are high enough to conceal equipment, vending machines and utilities.
- Consider ATFP/security requirements.

Walls

- Place masonry blocks in running bond.
- Do not attach screen walls to buildings.
- Do not place screen walls immediately adjacent to roadways or sidewalks.
- Walls adjacent to buildings shall match building material where possible.
- Consider air circulation requirements of HVAC equipment.

Fences

- Use decorative brown metal fencing and gates for high visibility sites.
- Dark brown colored vinyl-covered chain link fence in industrial, perimeter, and low visibility sites is allowed with ACRB approval.

Dumpster Enclosures

- Use ribbed CMU for wall construction and factory-finished doors. Color shall be beige for walls and dark tan for accents.
- Locate dumpsters to minimize visual impact.
- In high-visibility locations provide metal gates to screen dumpsters.
- Include landscaping areas and provisions for pedestrian access.

Force Protection

- Integrate security walls with the building architecture.
- Minimize the visibility of all force protection devices with landscaping and integral designs.
- Refer to Air Force standards.
- Jersey Barriers are allowed only with ACRB approval. Do not paint.



Basewide Design Guideline

LANDSCAPING

Use landscaping design to enhance facilities and neighborhoods. Organize landscape features to connect individual facilities to walkways, roadways, and open spaces.

Maintenance

- Establish a maintenance program.
- Prep planter and rock beds by spraying with pre-emergent herbicide and cover with weed control fabric.
- Xeriscape planting is preferred. Provide irrigation system only if necessary and only until plants are established.
- Concrete or masonry raised planting beds are acceptable where well integrated with hardscape design.



Edging

- Separate and define all planting areas from sod areas with edging.
- Provide concrete mow strips at planting beds as the standard.
- Wood and plastic lumber edging may be allowed subject to approval.



Landscape Screens

- Where possible, use landscaping instead of walls for screening.
- Reduce the negative visual impacts of open utility elements and unsightly features with landscape screening.
- Use a three-tier landscaped screen that combines ground cover, shrubs and small trees.



Roadways

- Use clustering of varied height planting elements to create visual interest. Consider street lighting and visibility for traffic safety and security.
- Use more formal patterns on high-profile primary streets.
- Plant street trees on the building side of sidewalks unless allowed for specific focus areas.





Parking Areas

- See "Parking" section for landscape requirements at parking areas.

Facility

- Use landscaping elements that complement building architectural features and proportions.
- If used, place large trees and shrubs away from building to allow for natural growth habits and comply with ATRP setback requirements.
- Provide a soft landscape transition at the base of the building.
- Highlight building entries and architectural features and screen unattractive features such as utility risers or service areas.
- Mix evergreen and deciduous palette of shrubs for seasonal interest.
- Design randomly spaced plantings and tree massing to fill-out areas between facilities.
- Use approved rock within planting beds.

Open Spaces

- Use turf only for areas where necessary for function. Use low maintenance and xeriscape ground cover in lieu of turf where possible.
- Create undeveloped natural areas using native grasses and shrubs.
- Incorporate maintenance-free ground cover materials in areas of steep slope or areas that are difficult to maintain.

Basewide Design Guideline

WALKWAYS AND PATHS

Develop a consistent pedestrian circulation system of walkways and paths to enhance the community. Connect passenger waiting shelters, outdoor plazas, parks, and other pedestrian gathering sites into the overall circulation network.

Sidewalks

- Provide minimum 5-foot wide walkways along all primary, secondary, and access roadways.
- Maintain a minimum 3-foot wide landscaped parkway between curb and sidewalk.
- Curvilinear and meandering walks are preferred where appropriate.
- Size sidewalks appropriately for the visual scale of the facility and the amount of pedestrian traffic volume.
- Use natural colored concrete with a broom finish and troweled edges.

Crosswalks and Ramps

- Ensure that paths lead to the safest crossing point possible, and cross roadways at 90-degree angles.
- Incorporate ADA accessible curb ramps and white-color crosswalk markings.
- Provide for adequate drainage away from the ramp.

Plazas and Courtyard Paving

- Use terra cotta colored concrete with natural concrete in a grid pattern for visual interest.
- Provide scoring and varied joint patterns to visually enhance paving surfaces.

Recreation Trails

- Provide a minimum 6-foot paved width in a free-form configuration that follows the contours or other natural features.
- Separate the trail system from vehicular traffic by a minimum of 10 feet.
- Provide a 5-foot by 10-foot paved rest area approximately every mile. Include a bench and litter receptacle at each location.
- Use asphaltic concrete for trail systems. In highly natural settings, use compacted, crushed fine aggregate.
- Incorporate activity generators, interpretive signs and recreation opportunities.





ROADS

Develop the transportation network to provide a consistent experience throughout the base. Primary, secondary and tertiary arteries shall have consistent design.

Primary

- Primary roadways are the widest and fastest arterials and will often contain two lanes of traffic in each direction, typically with planted medians.
- Minimize stops and turns, and eliminate on-street parking.
- Curb cuts for parking and service access are discouraged.
- Keep parking areas and buildings away from the road edge.

Secondary

- Secondary roadways are feeder streets from access roads to primary roads.
- On-street parking is discouraged.
- Keep off-street parking areas away from the road edge.
- Minimize the number of curb cuts from driveways and area entrances. Where necessary, locate curb cuts to be at least 40 feet from intersection.



Tertiary

- Tertiary roadways are the narrowest and slowest public streets and provide access to individual sites or parking areas.
- On-street parking and curb-cuts for driveways, parking lot entrances and services drive entrances are allowed.
- Maintain adequate access for large vehicles such as fire trucks and delivery vehicles.

Service Drives

- Service drives provide access for service vehicles to certain parts of a building or site.
- Combine service drives for several facilities where possible.
- Maintain a setback between the building and service drive. Consider ATPF requirements. Incorporate parking restriction signage or barrier into design.
- Minimize the visual impact of service drives with landscape screening.

Paving

- Use asphalt paving for all primary, secondary, and access roadways.
- Use concrete paving in loading areas, dumpster enclosures, and sites used by heavier vehicles.
- Gravel surfacing may be used on patrol roads and outlying sites only.
- Incorporate a concrete apron where gravel roads meet paved roads.
- All pavement repair patching shall match adjacent materials.
- Concrete pavers or stamped concrete shall be terra cotta colored.

Curb and Gutter

- Provide 6 inch curb and gutter for all roadways in developed areas.
- Comply with Base Civil Engineering standard design for curb and gutter.
- Patrol roads and service drives in outlying areas may not require curb and gutter, with ACRB approval.
- Wheel stops in lieu of curbs are not allowed.
- Do not paint concrete curbs.

Basewide Design Guideline

PARKING

Develop functional lots with clear circulation and a positive appearance that complements the facility. Provide a pleasant transition from the parking area to the facility.

General

- Parking layout must address maintenance, safety, and accessibility.
- Combine parking areas for multiple facilities, where possible.
- Observe AFTP setback requirements.
- Use the 90-degree parking configuration when possible.
- Provide a greenbelt of 20 feet from parking lots to streets.
- Use shrubs in groupings and landscaped berms around the perimeter to soften the impact of parking areas.
- Avoid the use of hedges outlining parking areas.
- Wherever possible, provide tree shading or shade canopy for parking areas. Incorporation of solar panels in shade canopy design is encouraged.

Medians and Islands

- Reduce visual mass of large parking areas with landscaped islands and planting strips. Consider shading where possible.
- Reduce the visual impact of large parking areas with landscape buffers and parking islands.
- For landscaped medians and planting islands, provide a minimum dimension of 6 feet to accommodate root system.
- Use trees in medians and islands to create shade and interest.
- Use decomposed granite or approved rock in medians and islands for ease of maintenance. Allow for breaks in the medians where necessary for pedestrian cross circulation.
- Provide medians for every four rows of vehicle and planting islands for every 20 stalls where there is adequate space.
- Coordinate layout for light poles with landscape islands and minimize their number to provide the required illumination.
- Provide designated areas for pedestrian cross traffic.

Reserved Parking

- Minimize the number of reserved spaces.
- Designate spaces with approved curb-mounted signs.

- Do not paint handicapped parking symbols on the ground.

Paving

- Provide 4 inch wide white striping for all pavement markings.
- Asphalt paving is the standard.
- Use concrete where required for heavy vehicles, motorcycle parking, and where fuel spills may occur.
- To obtain LEED points, use heat reflective concrete or pervious concrete when financially feasible in parking lots.

Curb and Gutter

- Use 6-inch concrete curbs and gutters for parking areas.
- Asphalt curbs, wood timbers, and precast wheel stops are prohibited.
- Do not paint concrete curbs.





SIGNS

Signs are an important and positive element in the overall base appearance. Their purpose is to clearly communicate necessary or helpful information for directions, identification and customer service without adding visual clutter.

General

- Use concise, clear signage in accordance with Air Force, AMC and Travis AFB Sign Standards. Refer to Department of the Air Force Design Standard UFC 3-120-01.
- Minimize the number of signs used for each facility.
- Signs must be consistent in style, placement, color, and language.
- Use Helvetica Medium, upper and lower case, for primary information and Helvetica Light for secondary information.
- Avoid mottoes, super graphics, or individual titles on buildings or identification signs.



Color

- Use Base Brown for backgrounds with reflective white lettering on metal placards unless otherwise required by governing criteria.
- Use bronze square metal posts.
- Finish the back of signs and fastening devices dark bronze.

Identification Signs

- Limit the use of monument signs to entry gates, headquarters buildings, housing neighborhoods and special use areas/facilities with ACRB approval.
- Construct monument signs with stucco finish and pin-mounted Helvetica letters.
- Limit the use of mottoes, individual titles, or insignia.
- Incorporate landscaping, accent lighting, and/or paving.
- Facility identification signs with street addresses are generally free standing and not applied to facility façades.
- Ensure facility number signs are placed in accordance with AF Sign Standards and are coordinated with architectural features.
- Building-mounted signs or individual letters with corporate logos are allowed for commercial facility signs only with ACRB approval.

Direction Signs

- Use to identify highly frequented or special interest destinations and street names.
- Display the Air Mobility Command logo decal on the left of all street name signs.

Regulation Signs

- Use for traffic control, parking, and base warnings.
- Traffic control signs must follow the Manual on Uniform Traffic Control Devices administered by the Federal Highway Administration for color and display requirements.
- Handicapped parking signs shall follow California Title 24 signage requirements for color and display requirements.
- Base warning signs must adhere to the Air Force Sign Standard for color and display requirements.



Basewide Design Guideline

SITE FURNISHINGS

General

- Select site furnishings from preferred product list. Contact 60 CES/CEPM.
- All metal furnishings shall be dark bronze, factory applied anodized or powder-coat finish.



Seating/Benches

- Provide seating along walkways, building entries, courtyards, and plazas.
- Place benches within a paved area.

Litter/Ash Receptacles

- Place surface-mounted or portable litter and ash receptacles at building entrances, pathways, outdoor seating, and picnic areas.
- Locate these to be functional, yet visually unobtrusive.

Precast Planters

- Minimize the use of freestanding planters.
- When used, locate planters in conjunction with other exterior elements.
- Use planters that match litter and ash receptacles in design.



Picnic Tables

- Use factory finished, recycled plastic picnic tables with metal frames.
- Limit tables to outdoor picnic or dining areas, and group to allow for large parties or individual family outings.
- Provide mid-morning to late-afternoon shade for all picnic tables.

Barbecue Grills

- Limit built-in grills to recreational areas, dormitories and fire stations.
- Use materials that complement adjacent facilities.
- Placement and design of built-in grills must be approved by the ACRB.

Bike Racks

- Provide bicycle parking areas for all facilities. Combine areas for densely sited buildings.
- Incorporate bike racks into hardscape design within 200 yards of building entrance. (Refer to LEED SS Credit 4.2)
- Screen large bicycle parking areas with landscaping or screen walls.





Bollards

- Use bollards to protect buildings, equipment, and people from vehicle impact and to restrict access.
- Use a six inch diameter, steel round top bollard as the standard. Paint Base Brown and apply three inch wide yellow and black striped reflective tape around the bollard six inches from the top.
- Feature/accent bollards should be precast concrete and match beige stucco.
- For force protection, use 8-inch diameter, concrete filled, steel pipe.
- For bollards protecting equipment or buildings from vehicle damage, color may depend on location and need for visibility. Coordinate with Base Civil Engineering staff to determine color.
- Bollards at the flightline and industrial areas shall be painted safety yellow with reflective beads for high visibility especially at night.

Tree Grates

- Use black cast iron tree grates set into concrete paving at all formal plazas and courtyards.

Playground Equipment

- Provide consistent-style pre-manufactured play equipment at parks, family housing areas, child development centers, community centers, and recreational areas.
- Place equipment with safe ground surfacing, benches, litter receptacles, and landscaping for shade.
- Provide adequate pedestrian circulation paths to play areas.

Flag Poles

- Use a brushed aluminum pole, mounted on a concrete base.
- Create a sense of place at flag pole locations with landscape or plaza design.

Basewide Design Guideline

LIGHTING

Exterior lighting is a system that directly impacts the visual qualities of the base. By day, the fixtures and poles add visual character and rhythm to the streetscape. By night, these amenities become a dominant force in the perception of safety and comfort.

General

- Use underground utility service for area lighting.
- Use high-pressure sodium lamps for all applications.
- Area lighting shall be designed using photometrics.
- Consider light pollution in lighting design. Minimize lighting level on buildings, especially on vertical surface (to comply with LEED criteria). Balance need for safety, security and environmental impact.
- Exterior lighting should be controlled by a photo cell or by radio frequency controls.

Streets

- All classifications of roadways will use the same luminaires, poles, and mounting height.
- Use factory-finished cobra-head luminaires and poles, and space poles equally.
- Equally space poles on alternating sides of all roadways.

Parking Areas

- Use arm-mounted, square, shoebox-type luminaires.
- Use multiple luminaires to reduce the number of poles.
- Luminaires and poles shall be factory finished in a dark bronze color.
- Coordinate pole placement with parking island and tree locations.

Walkways and Paths

- Provide pedestrian-scaled lighting fixtures throughout housing area and along recreation trails and sidewalks not adjacent to roadways.
- Use same type of luminaires and poles as in parking areas. Other path lighting alternatives may be used, subject to approval.
- Equally space light fixtures for sidewalks on same side of walk.

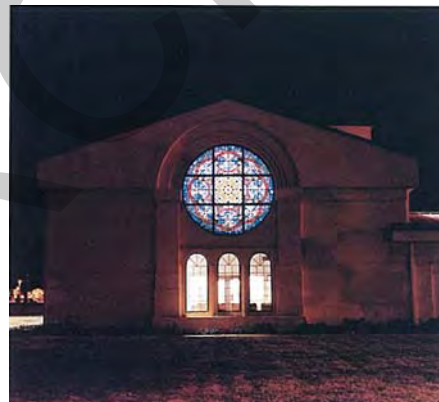
Mounting Heights

- Control spillover light near residential areas.

- Keep mounting heights low and consistent. Any lights mounted over 32 feet high require ACRB approval.

Architectural and Accent

- Uplight architectural and landscaping features and building entrances to emphasize importance and hierarchy, only if approved by the ACRB.
- Incorporate recessed luminaires to wash light across plaza, paving and stairs.
- Limit use of wall mounted fixtures for area lighting to industrial and service areas. When used, integrate into the building design and use dark bronze color fixtures.





UTILITIES

Use underground utility service to reduce overhead visual clutter.

Utility Lines

- Do not cut existing pavements to install utilities - bore where possible.
- Use trenchless replacement and pipe lining methods to repair/replace existing utilities when feasible.

Utility Structures

- Avoid freestanding utility structures.
- Use underground vaults for equipment where possible.
- Locate pad-mounted equipment in less visible areas and screen with landscaping or screen walls.
- Paint utility equipment Base Brown. Electrical panels and transformers factory finished in green are acceptable if placed among landscape.



Fire Hydrants

- Locate fire hydrants at least 5 feet away from other structures. Maintain a 30-inch clear area.
- Paint hydrants Base Brown.

Utility Components

- Carefully place and organize equipment and services.
- Locate mechanical equipment on the least visible side of the building.
- Screen mechanical equipment with landscaping materials or screen walls.
- Paint Base Brown unless within 10 feet of a light-colored surface, then match wall color.
- In new buildings or major renovations, provide meter for each type of utility.
- Minimize the use of all externally attached meters and control devices. If used, color shall match the wall color.
- Exterior surface-mounted lines or conduits are not allowed (except meters and control devices).
- Paint freestanding pipes and above-ground utility system components in remote locations Base Brown.



Communications

- Collocate coaxial and telephone exterior components and entry points.
- Align all communication components with one another on the horizontal and vertical plane.

SPECIAL CONSIDERATIONS

The following are special considerations that may be applicable to specific projects:

Antiterrorism/Force Protection and Building Perimeter Security

In addition to conventional setback distances required by UFC, some facilities will require vehicle barrier at the perimeter of the facility.

- The following are acceptable options for vehicular barrier:
 - Low CMU walls with landscape berm
 - Low concrete wall
 - Boulders
 - Concrete or CMU Planters
 - Steel bollards with steel cable
- Mechanically-operated units are not preferred due to possible failure. Use must be approved by Base Civil Engineering.
- Consideration should be given to connecting the line of protection from one facility to the next, in order to create larger protected zones.

Flightline Security

- Consistent material, height, and design of security wall and gates.
- Use of buildings as security line where possible.

Shelter-In-Place

- A "Shelter-in-place" (SIP) room is required at all facilities.
- Design and location of the SIP room shall meet UFC 4-010-01-31 requirements, and should be in a centralized common room accessible for all occupants of the building, preferably in the entire building interior.
- The SIP room shall be equipped with a "kill" switch that shuts off the building ventilation system.

Accessibility

- All areas of the base shall be handicapped-accessible. Design of new and renovated facilities shall comply with Federal accessibility standards.

Environmental Impact

- **Brownfield Redevelopment Areas.** To promote sustainable design, reuse of previously contaminated site is encouraged. Maps indicating location of these sites are available from Asset Management Flight.
- **Contaminated Sites.** Where new construction is located on a contaminated site, passive venting of soil below slab may be required. Coordinate with Base Civil Engineering for required detailing.

Noise Concerns

- Within designated noise zones, facilities shall be designed in compliance with performance standards per AICUZ requirements. Contact Base Community Planner.

Maintenance

- **Roof fall protection.** Where access to the roof is required for maintenance, facility design shall include a roof ladder, hatch and fall protection anchorage system for maintenance personnel.
- **Product Compatibility.** To maximize maintenance resources, reduce the number of different products used in facilities. The following are types of products where compatibility should be considered. Contact facility maintenance for list of preferred products.
 - chillers
 - pumps
 - fire alarm control panels
 - lock hardware
 - ceiling tile
 - lamps
 - ballasts



Low CMU landscape wall



Low concrete wall



Recessed security bollard system



TRAVIS BASE IDENTITY

Highlighting and incorporating elements of Travis Air Force Base’s unique identity in the built environment is encouraged to create the sense of unity through a common mission. The designer is encouraged to explore themes related to the history of the Air Force, the Air Mobility Command, the 60th Air Mobility Wing, and tenant units, and find elements that would be appropriate for the specific facility design. Such thematic material may include historic flags, symbols, emblems, and mottoes. These thematic elements should be incorporated where appropriate. The ACRB will guide the appropriate use on a case-by-case basis. The incorporation of these theme elements is especially appropriate for highly visible facilities along the main thoroughfare and for public facilities.

Example Application – Chevron Motif

The three chevron symbols on the 60th Air Mobility Wing emblem represent the three weapons systems present at Travis AFB. This motif serves as a reminder of the role Travis AFB plays in the larger context of the Air Force and the country we serve.

As an example application, the three chevron motif may be used as a graphic element in facility design. Example uses include:

- Repetition of the motif to form a pattern.
- Hiding a portion of the motif to create a more abstract pattern.
- This motif may appear in building elements such as reveal patterns in walls and fascia, etched patterns in glazing, borders and patterns in walk ways and flooring, etc.
- The motif may appear in landscape planting design.
- The motif may appear as an abstract border for signs, plaques, and other informational bulletins.



Chevron motif as background graphic



Focus Area Design Guideline



TRAVIS AVENUE

- This is the main corridor that leads from the Main Gate to the Civic Center Focus Area. The existing road is two lanes in each direction with standard sidewalk immediately adjacent to the road in most locations. The narrow median is colored concrete.
- The urban characteristic of this path should remain formal and support formal processions during such occasions. The street lighting upgrade currently underway will provide good illumination. Place banners or flags on the light poles would be appropriate.
- Landscaping along this street currently consists of turf and trees. Introduction of low xeriscape planting along the sidewalk may be appropriate to reduce the amount of turf area, as long as visibility is maintained. Creating a range of heights for landscape clusters is encouraged to create visual interest.
- Isolated flower beds along the median near the Civic Center may be appropriate to draw attention to this area. However, water conservation measures should be considered when this approach is used.



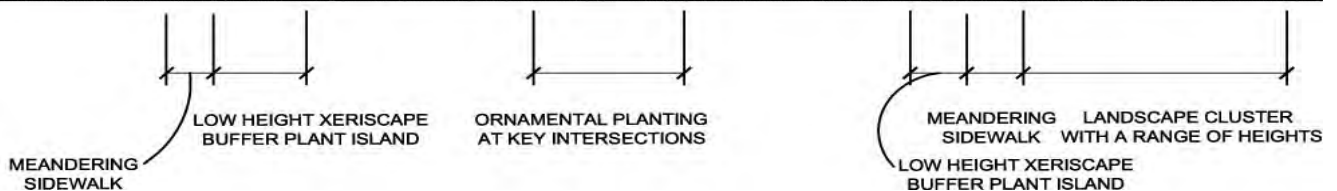
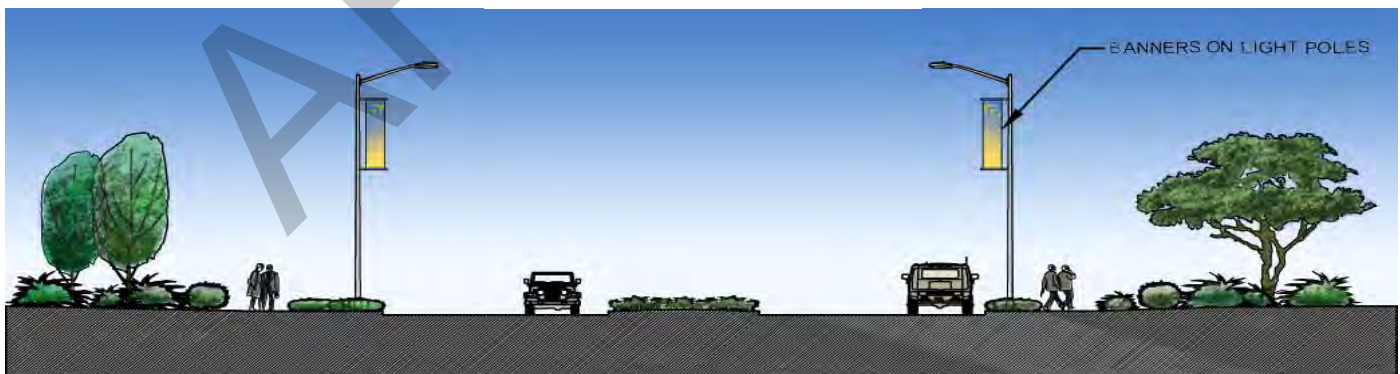
+ Incorporate banners with light poles



+ Planting clusters of varying heights



+ Meandering sidewalk with landscaping islands



+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.



+ Landscape backdrop for signage wall is appropriate



Positive space at street intersection



+ Pavement design to accent intersection

BURGAN BOULEVARD

- This is the secondary corridor that leads from the North Gate to the flightline. It passes through several neighborhoods including the park, dormitory complex, civic center, and flightline operations area.
- The urban characteristics of this path should be varied and emphasize the progression from one neighborhood to the next.
- Each segment of this path may have different landscaping themes that are akin to the neighborhood where the segment is located.
- At each of the focus areas, the main intersection of the roads should be shaped into a positive space. As an example, circular shaped low walls may be appropriate to define the intersection and to allow placement of direction signage.



+ Signage at street intersection to mark neighborhoods

+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.

Focus Area Design Guideline

CIVIC CENTER FOCUS AREA

- This area includes the future Wing HQ building, hotel, future conference center and flag display/static aircraft display.
- This is the symbolic center of the base. Formal outdoor ceremonies or processions may take place here. This may also serve as a backdrop for media interface.
- The urban characteristics may be described as formal. Symmetrical forms and grand vistas may be appropriate.
- The architecture style should be stately and express a sense of pride and permanence. References to the history, heritage, and culture of Travis AFB, the Wing, the Command or the Air Force would be appropriate. In addition to the material shown in the Basic Architectural Palette, incorporation of natural stone surfaces for wall elements is allowed.
- Landscape design should be neat and trimmed. Use of more ornamental and colorful plants from the Focus Areas Planting Palette would be appropriate.



+ Low and formal planting around buildings



+ Stately architectural design is appropriate for this area.



+ Entrance canopy to provide shelter from sun & wind



+ Masonry and stone material are allowed



+ Formal landscape islands in front of main entry



+ Symmetrical floor plan with roof hierarchy

+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.



FLIGHTLINE OPERATIONS FOCUS AREA

- This area includes the future Maintenance Hangars and Flight Planning Operations Building (Mission Launch Facility or Consolidated Operations Facility), new Fire Station and the Control Tower.
- This is the heart of flightline operations and represents the center of flight control.
- The urban characteristics may be described as linear, as this area is formed against the edge of the flightline. Flightline orientation may be the formal order that persists in this focus area.
- The architecture style should project the image of technology and a sense of stability. References to the history, heritage, and culture of aviation would be appropriate. Alternative roof shapes such as a curved roof for the primary roof area may be appropriate and would be allowed. Lower slope roof (2:12 min.) on the secondary roof would be allowed for the purpose of establishing roof line hierarchy.
- Landscape design should be low and horizontal, allowing the transition to the vast openness of the flightline. Use of geometric shaped plants from the Focus Areas Planting Palette would be appropriate.



+ Architectural forms, reminiscent of historic hangars, is appropriate.



+ Decorative roof over main building entry



+ Modern building with traditional proportions and symmetry



Clean façade and simple geometry



+ Unique roof line may be appropriate for this focus area.



Shrub hedges in wide landscape rock islands

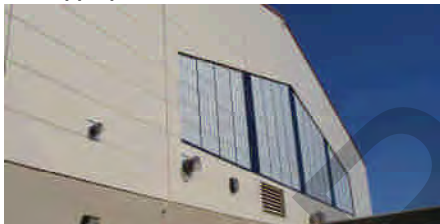


Modern technology incorporated in classical proportions

+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.

GATEWAY FOCUS AREA

- This area includes the future Aerial Port Complex, the CRW complex and the future Passenger Terminal.
- This is the center of transportation where people and goods are moved to and from the base. This would also be the point of entry for distinguished visitors arriving by air.
- The urban characteristic of this area is functionality and organization. Large blocks and wide roads are laid out for movement of vehicles as primary consideration.
- The architectural form should follow function in this area. However, in some facilities, such as the Passenger Terminal, it may be appropriate to have a sweeping roofline. Expression of movement, efficiency, and functionality would be appropriate. Because of the large structures and clear spans, expression of the structural system may also be appropriate. In addition to the material shown in the Basic Architectural Palette, incorporation of metallic and glass finishes should be considered.
- Landscape design should emphasize patterns and rhythm and supports the notion of movement. Use of plants from the Basewide Planting Palette would be appropriate.



Simplicity of architectural form is appropriate for large functional structures.



Consider human scale at main entry to large structures.

+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.



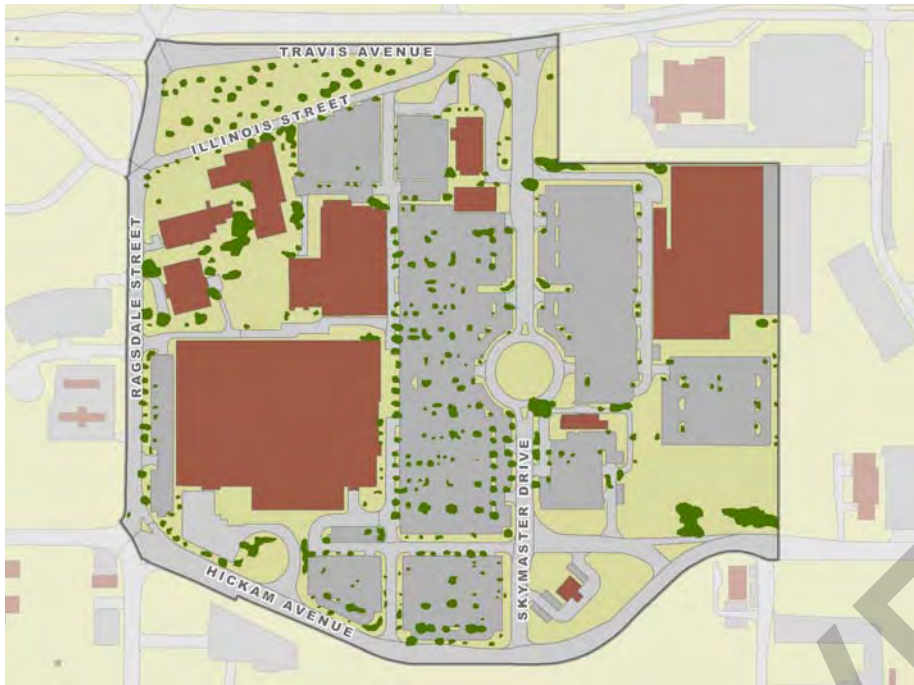
+ Glass façade may be used where appropriate for building function (such as a passenger terminal).



+ Landscaping design should consider adjacency to open grass fields.



+ Sun shading (for the passenger terminal) should be compliant with building design



MARKETPLACE FOCUS AREA

- This area includes the Base Exchange, the Commissary and other retail and food venues.
- This is the center of commercial activities where people come to shop for food and necessities.
- The urban characteristic of this area is informal and provides a leisurely backdrop for commercial activities. Consideration for pedestrians is primary. However, good vehicular circulation and access is important for the shopping functions.
- The architecture style should be colorful, informal and inviting. References to the historic Northern Californian architecture, such as missions, settlements and wineries, would be appropriate.
- In addition to the material shown in the Basic Architectural Palette, incorporation of wood appearance finishes (plastic lumber) and ornamental ceramic tile may be appropriate.
- Pedestrian scale amenities, such as seating areas and small fountains that bring visual and acoustical interest, are encouraged.
- As parking areas are renovated to address AFTP setbacks, a covered arcade should be created at the front of the buildings to provide a pedestrian link to all the buildings around the central parking area.
- Landscape design should be informal and varied in size and shape. Low landscaping shall be provided to separate vehicular and pedestrian areas. Use of plants from both the Focus Areas and Basewide Planting Palettes would be appropriate.



+ Covered arcade to shelter pedestrians



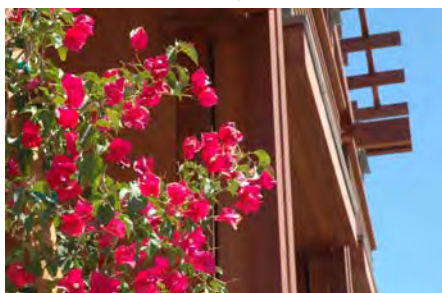
+ Textured pedestrian walk path



+ Seating space adjacent to articulated façade



+ Trellis with landscaping as a connecting element



+ Integrate planting with building elements



+ Seating in partially shaded area



+ Architecture that emphasizes outdoor space

+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.

Focus Area Design Guideline

DORMITORY FOCUS AREA

- This area includes the dormitory complex and adjacent outdoor recreation area.
- This is the home for many of the unaccompanied airmen. This is a place of rest, relaxation and recreation.
- The urban characteristic of this area is informal and meandering. It should provide a sense of place where individuals can identify it as home.
- Small scale ground-level urban plazas should be incorporated into the residential units where internet access, café, retail venues and other social activities can be supported.
- The architecture style should be informal and human scale. However, style should appeal to the typically younger demographics of the residents. Use of more vibrant and varying colors and materials in this area is encouraged. Asymmetry in form that allows for the identification of the smaller units would be appropriate.
- Landscape design should be informal, natural and hardy. References to native ecology would be appropriate. Use of plants from the Basewide Planting Palette would be appropriate.
- Sustainable features such as solar hot water heating and shading may be appropriate and should be incorporated into the architectural design.



Textured pavement surface for walk paths



+ Hardscape to support social and communal interaction



+ Architectural detailing on window façade, such as cornice and bay windows, is appropriate.



+ Distinctive façade units to provide residential scale building



+ Configure buildings to form small plazas



Incorporate seating into hardscape



+ Reduce visual mass of large buildings by breaking into smaller units

+ Photo depicts relevant elements only. Other elements in photograph may not be applicable.

Base Color Palette

Wall Color



Beige
Fed. Standard 595B #33717

Roof Color



Terra Cotta
Fed. Standard 595B #22144

Accent Colors



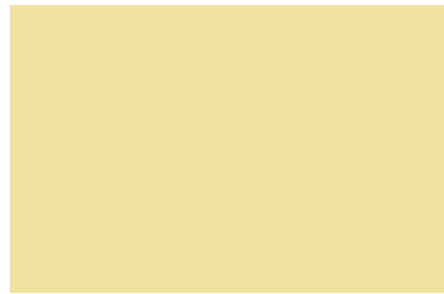
Base Brown
Fed. Standard 595B #20117



Dark Brown
Fed. Standard 595B #20040

Focus Area Color Palette

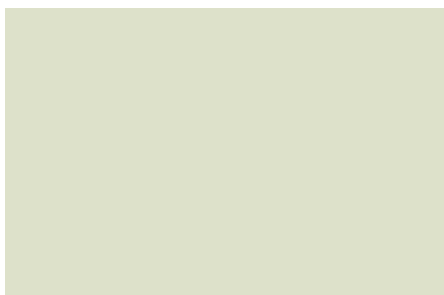
Wall Colors



Light Yellow
Fed. Standard 595B #23727



Sand
Fed. Standard 595B #37886



Light Grey
Fed. Standard 595B #37722

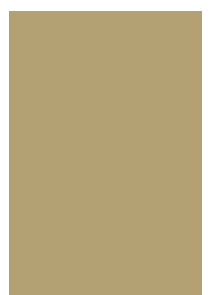


Light Tan
Fed. Standard 595B #23617

Accent Colors



Tan
Fed. Standard 595B #30318



Warm Grey
Fed. Standard 595B #33448

PLANT MATERIAL LIST

<p>Trees <u>Large (36' - 60' tall)</u> Acacia melanoxylon / Black Acacia Aesculus californica / California Buckeye Alnus cordata / Italian Alder Betula nigra 'Dura Heat' / Black Birch Calodendrus decurrens / Incense Cedar Casuarina stricta / Coast Beefwood Cedrus deodara / Deodar Cedar Ceratonia siliqua / Carob Tree Pinus canariensis / Canary Island Pine Pinus pinea / Italian Stone Pine Populus fremontii 'Nevada' / Fremont Cottonwood Pyrus calleryana 'Holmford', 'Redspire' / Flowering Pear Quercus agrifolia / Coast Live Oak Quercus lobata / Valley Oak (natural form) Quercus shumardii / Shumard Red Oak Quercus suber / Cork Oak Quercus virginiana 'Heritage' / Southern Live Oak Schinus molle / California Pepper</p> <p><u>Medium (20' - 35' tall)</u> Geijera parviflora / Australian Willow Koelreuteria bipinnata / Chinese Flame Tree Laurus nobilis / Grecian Laurel Olea europaea 'Swan Hill' / Fruitless Olive Rhus lancea / African Sumac *Umbellularia californica / California Bay (sheltered locations)</p> <p><u>Small (10' - 19' tall)</u> Arbutus unedo / Strawberry Tree Lagerstroemia faurei x indica (Indian hybrids) / Crape Myrtle</p> <p>Shrubs <u>Large (7' - 14' tall)</u> Arctostaphylos densiflora 'Sentinel' / Vine Hill Manzanita Cercis occidentalis / Western Redbud Cotoneaster lacteus / (no common name) Eleagnus pungens / Silverberry Garrya elliptica 'James Roof' / Coast Silktassel Heteromeles arbutifolia / Toyon Lavatera assurgentiflora / Tree Mallow *Myrica californica / Pacific Wax Myrtle (afternoon shade) Nerium oleander / Oleander Photinia fraseri / Photinia Prunus ilicifolia / Hollyleaf and Catalina Cherry Rhamphiolepis 'Majestic Beauty' / Indian Hawthorn Rhus ovata / Sugar Bush Xylosma congestum / Shiny Xylosma</p>	<p><u>Medium (3.5' - 6' tall)</u> Arbutus unedo 'Compacta' / Compact Strawberry Tree</p> <p>Arctostaphylos densiflora 'Howard McMinn' / Vine Hill Manzanita Callistemon viminalis 'Little John' / Dwarf Bottlebrush Calycanthus occidentalis / Spice Bush *Cornus stolonifera / Red-Osier Dogwood (shade) Nerium oleander 'Petite Red', 'Petite Salmon', 'Petite Pink' / Dwarf Oleander Photinia fraseri / Photinia Rhamphiolepis indica 'Clara', 'Jack Evans' / Indian Hawthorn Rosa californica / California Wild Rose Rosmarinua officinalis 'Tuscan Blue' / Upright Rosemary Olea europaea 'Little Ollie' / Dwarf Olive Punica granatum 'Nana', 'Chico' / Dwarf Pomegranate Rhamnus californica 'Eve Case' / Coffeeberry *Viburnum suspensum / Sandankwa Viburnum (shade) Viburnum tinus 'Spring Bouquet' / Laurustinus Westringia fruticosa / Coast Rosemary Xylosma congestum 'Compacta' / Shiny Xylosma</p> <p><u>Small (1' - 3' tall)</u> Mahonia aquifolium 'Compacta' / Dwarf Oregon Grape Myrtus communis 'Compacta' / Dwarf Myrtle Pyracantha 'Red Elf', 'Tiny Tim' / Pyracantha Rhamphiolepis indica 'Ballerina' / Pink Indian Hawthorn</p> <p>Ground Cover Acacia redolens 'Desert Carpet' / Desert Acacia Arctostaphylos 'Emerald Carpet' / Manzanita Cotoneaster dammeri 'Coral Beauty' / Bearberry Cotoneaster Fremontodendron 'Ken Taylor', 'Dara's Gold' / Flannel Bush Juniperus sabina 'Buffalo' / Buffalo Juniper Rosmarinua officinalis 'Prostrata' / Prostrate Rosemary</p> <p>Grass and Grasslike Perennials Agapanthus africanus 'Queen Anne' / Lily-of-the-Nile Bouteloua gracilis / Blue Grama Grass Carex barberae / Berkeley Sedge Deschampsia cespitosa / Tufted Hair Grass Dianella caerulea 'Becca', Cassa Blue / Flax Lily Dianella revoluta 'Big Rev' / Flax Lily Dietes vegeta / Fortnight Lily Festuca californica / California Fescue Festuca idahoensis / Idaho Fescue Helictotrichon sempervirens / Blue Oat Grass Juncus patens 'Elk Blue' / California Gray Rush Lomandra longifolia 'Breeze' / Breeze Lomandra longifolia 'Nyalla' / Nyalla Muhlenbergia rigens / Deer Grass</p>	<p>Nassella pulchra / Purple Needlegrass</p> <p>Espalier Camellia sasanqua / Sun Camellia Juniperus chinensis and procumbens / Juniper Photinia fraseri / Photinia Pyracantha angustifolia / Fire Thorn Rhamphiolepis indica / India Hawthorne Trachelospermum jasminoides / Star Jasmine</p> <p>Vines Clytostoma callistegioides / Violet Trumpet Vine Ficus pumila / Creeping Fig Macfadyena unguis-cati / Cat's Claw Parthenocissus tricuspidata / Boston Ivy</p> <p>Succulents (May be used in pots) Agave victoriae-reginae / Queen Victoria Agave Aloe variegata / Partridge-Breast Aloe Dasylirion wheeleri / Desert Spoon Euphorbia milii var 'Millii' / Crown of Thorns Sedum spp. / Stonecrop Sempervivum spp. / Houseleek</p>
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* Indicates plants with special requirements.

Special Application Plants**Areas irrigated with non-potable water**Trees

Acacia melanoxylon / Black Acacia
 Arbutus unedo / Strawberry Tree
 Casuarina stricta / Coast Beefwood
 Ceratonia siliqua / Carob Tree
 Cedrus deodara / Deodar Cedar
 Lagerstroemia faureri x indica (Indian hybrids) /
 Crape Myrtle
 Magnolia grandiflora / Magnolia
 Olea europaea 'Swan Hill' / Fruitless Olive
 Pinus canariensis / Canary Island Pine
 Pistacia chinensis 'Keith Davey' / Chinese
 Pistache (seedless variety)
 Populus fremontii 'Nevada' / Fremont
 Cottonwood
 Pyrus calleryana 'Aristocrat', 'Chanticleer',
 'Holmford', 'Redspire' / Flowering Pear
 Quercus virginiana 'Heritage' / Southern Live
 Oak
 Rhamphiolepis 'Majestic Beauty' / (no common
 name)
 Schinus molle / California Pepper

Shrubs

Callistemon viminalis 'Little John' / Dwarf
 Bottlebrush
 Cotoneaster lacteus / (no common name)
 Dodonea viscosa / Hopseed Bush
 Heteromeles arbutifolia / Toyon
 Lavandula species
 Mahonia aquifolium 'Compacta' / Dwarf
 Oregon Grape
 Myrtus communis 'Compacta' / Dwarf Myrtle
 Nerium oleander / Oleander
 Olea europaea 'Little Ollie' / Dwarf Olive
 Photinia fraseri / Photinia
 Prunus ilicifolia / Hollyleaf and Catalina Cherry
 Pyracantha 'Red Elf', 'Tiny Tim' / Pyracantha
 Rhamphiolepis indica 'Ballerina', 'Clara', 'Jack
 Evans' / Indian Hawthorn
 Phormium tenax (cultivars) / New Zealand Flax
 Rosmarinua officinalis 'Tuscan Blue' / Upright
 Rosemary
 Viburnum suspensum / Sandankwa Viburnum
 Viburnum tinus 'Spring Bouquet' / Laurustinus

Ground cover

Acacia redolens 'Desert Carpet' / Desert Acacia
 Juniperus sabina / Sabina Juniper
 Rosmarinua officinalis 'Prostrata' / Prostrate
 Rosemary

Grasses and Grasslike Perennials

Agapanthus africanus / Lily-of-the-Nile
 Deschampsia cespitosa / Tufted Hair Grass
 Dianella caerulea 'Cassa Blue' / Flax Lily
 Dianella revoluta 'Big Rev' / Flax Lily
 Festuca idahoensis / Idaho Fescue
 Juncus patens / California Gray Rush
 Lomandra longifolia 'Breeze' / Breeze
 Lomandra longifolia 'Nyalla' / Nyalla

Lawn trees

Betula nigra 'Dura Heat' / Black Birch
 Acer rubrum 'Bowhall', 'October Glory', 'Red
 Sunset' / Red Maple
 Ginkgo biloba 'Autumn Gold', 'Fairmount' /
 Maidenhair Tree
 Pyrus calleryana 'Aristocrat', 'Chanticleer',
 'Holmford', 'Redspire' / Flowering Pear
 Quercus shumardii / Shumard Red Oak
 Quercus virginiana 'Heritage' / Southern Live
 Oak

Bioswale areasTrees

Acer rubrum 'Bowhall', 'October Glory', 'Red
 Sunset' / Red Maple
 Aesculus californica / California Buckeye
 Betula nigra 'Dura Heat' / Black Birch
 Populus fremontii 'Nevada' / Fremont
 Cottonwood
 Pyrus calleryana 'Aristocrat', 'Chanticleer',
 'Holmford', 'Redspire' / Flowering Pear
 Quercus virginiana 'Heritage' / Southern Live
 Oak

Shrubs

Cornus stolonifera / Red-Osier Dogwood
 Myrica californica / Pacific Wax Myrtle

Grass and Grasslike Perennials

Carex barberae / Berkeley Sedge
 Festuca "No Mow" / Fine Fescue Blend
 Juncus patens 'Elk Blue' / California Gray Rush

* Image courtesy of Dave Clark

<http://www.geocities.com/daveclarkecb/Australia/ClareTrees.html>

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Lomandra longifolia
'Breeze'



Dianella caerulea
'Cassa Blue'



Casuarina stricta *

EXAMPLE PLANT COMBINATIONS

Combination A (Open non-irrigated grass area)

- Casuarina stricta / Coast Beefwood
- Dianella caerulea 'Cassa Blue' / Flax Lily
- Dianella revoluta 'Big Rev' / Flax Lily
- Lomandra longifolia 'Breeze' / Breeze
- Lomandra longifolia 'Nyalla' / Nyalla

Combination B (Large parking area)

- Quercus virginiana 'Heritage' / Southern Live Oak
- Agapanthus africanus 'Queen Anne' / Lily-of-the-Nile
- Phormium tenax 'Monrovia Red' / Compact Red New Zealand Flax
- Nerium oleander 'Petite Salmon' / Dwarf Oleander
- Olea europaea 'Little Ollie' / Dwarf Olive

Combination C (Tree and shrub cluster approx. 40' from buildings)

- Schinus molle / California Pepper
- Acacia redolens 'Desert Carpet' / Desert Acacia
- Callistemon viminalis 'Little John' / Compact Bottlebrush
- Lomandra longifolia 'Breeze' / Breeze
- Punica granatum 'Nana', 'Chico' / Dwarf Pomegranate
- Tulbaghia violacea 'Variegata' / Society Garlic

Combination D (Small trees, shrubs and ground cover near buildings)

- Pyrus calleryana 'Redspire' / Flowering Pear
- Agapanthus africanus 'Tinkerbelle' / Variegated Lily-Of-The-Nile
- Mahonia aquifolium 'Compacta' / Dwarf Oregon Grape
- Nerium oleander 'Petite Red', 'Petite Salmon' / Dwarf Oleander
- Rhaphiolepis indica 'Clara' / Indian Hawthorn

Combination E (Small trees, shrubs and ground cover near buildings)

- Pistacia chinensis 'Keith Davey' / Chinese Pistache (seedless variety)
- Cotoneaster dammeri 'Coral Beauty' / Bearberry Cotoneaster
- Dianella caerulea 'Becca' / Flax Lily
- Rhaphiolepis indica 'Ballerina' / Pink Indian Hawthorn

Combination F (Street tree, shrub and ground cover)

- Quercus shumardii / Shumard Red Oak
- Callistemon viminalis 'Little John' / Dwarf Bottlebrush
- Juniperus sabina 'Buffalo' / Buffalo Juniper
- Nerium oleander 'Petite Pink' / Dwarf Pink Oleander
- Phormium tenax 'Tom Thumb' / Dwarf New Zealand Flax
- Rhaphiolepis indica 'Jack Evans' / Pink Indian Hawthorn



Nerium oleander
'Petite Salmon'



Olea europaea
'Little Ollie'



Punica granatum
'Nana'



Tulbaghia violacea
'Variegata'



Rhaphiolepis indica
'Clara'



Phormium tenax
'Monrovia Red'



Agapanthus africanus B.
'Queen Anne'



Quercus virginiana A.
'Heritage'



Callistemon viminalis
'Little John'



Acacia redolens
'Desert Carpet'



Schinus molle



Mahonia aquifolium C.
'Compacta'



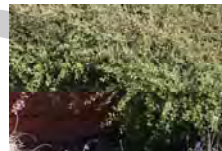
Agapanthus africanus
'Tinkerbelle'



Pyrus calleryana D.
'Redspire'



Rhaphiolepis indica E.
'Ballerina', 'Pinkie'



Cotoneaster dammeri
'Coral Beauty'



Pistacia chinensis
'Keith Davey'



Rhaphiolepis indica
'Clara'



Juniperus sabina F.
'Buffalo'



Quercus shumardii

PLANT MATERIAL LIST

Trees

Large (36' - 60' tall)

Acer rubrum 'Bowhall', 'October Glory', 'Red Sunset' / Red Maple
Magnolia grandiflora 'Samuel Sommer' / Southern Magnolia
Pyrus calleryana 'Aristocrat', 'Chanticleer' / Flowering Pear
Quercus ilex / Holly Oak

Medium (20' - 35' tall)

Albizia julibrissin / Silk Tree

Small (10' - 19' tall)

Arbutus unedo / Strawberry Tree (multi-trunk form)
Cercis c. texensis 'Oklahoma' / Eastern Redbud
Cotinus coggygria 'Royal Purple' / Purple Smoke Tree
Ginkgo biloba 'Autumn Gold', 'Fairmount' / Maidenhair Tree
Lagerstroemia faureri x indica (Indian hybrids) / Crape Myrtle
Lagerstroemia 'Tuscarora' / Crape Myrtle (multi-trunk form)
Magnolia grandiflora 'Little Gem' / Magnolia
Photinia fraseri / Photinia
Prunus cerasifera 'Krauter Vesuvius', 'Purple Pony' / Purple Plum

Shrubs

Medium (3.5' - 6' tall)

Leptospermum scoparium / New Zealand Tea
*Loropetalum chinense / Red Razzleberry (afternoon shade)
*Rosa 'Flower Carpet' / Flower Carpet Rose (dead head after flowering, yearly pruning)
*Rosa 'Jeepers Creeper', 'Ralph's Creeper', 'Red Ribbons' / Ground Cover Rose (dead head after flowering, yearly pruning)

Small (1' - 3' tall)

Callistemon viminalis 'Little John' / Compact Bottlebrush
Coleonema pulchrum 'Sunset Gold' / Breath of Heaven
Nerium oleander (dwarf varieties) / Dwarf Oleander
*Polystichum munitum / Western Sword Fern (shade)
Raphiolepis indica 'Ballerina', 'Pinkie' / Dwarf Pink Indian Hawthorn
Pyracantha 'Red Elf' / Dwarf Pyracantha

Ground cover

*Cerastium tomentosum / Snow-In-Summer (dead head after flowering)
Juniperus procumbens 'Nana' / Dwarf Garden Juniper
Vinca minor 'Bowles' / Dwarf Periwinkle

* Indicates plants with special requirements.

Grasses and Grasslike Perennials

Agapanthus africanus 'Peter Pan', 'Tinkerbell' / Dwarf Lily-Of-The-Nile
Dianella caerulea 'Little Becca' / Dwarf Flax Lily
Dianella prunina 'Utopia' / Flax Lily
Dianella revoluta 'Baby Bliss', 'Little Rev' / Dwarf Flax Lily
Liriope muscari / Lily Turf (shade)
Phormium tenax 'Flamingo', 'Jack Spratt', 'Tom Thumb', 'Tiny Tiger' / New Zealand Flax
Tulbaghia violacea / Society Garlic

Perennials

Aspidistra elatior / Cast Iron Plant (shade)
Heuchera spp. / Coral Bells
Iris douglasiana (hybrids) / Pacific Coast Iris
*Lavandula angustifolia 'Hidcote' / 'Munstead' / English Lavender (dead head after flowering, yearly pruning)
*Leonotis leonurus / Lion's Tail (prune to ground in fall)
Origanum rotundifolium 'Kent Beauty' / Ornamental Oregano (prune to ground in fall)
*Penstemon hybrid / Garden Penstemon (prune to ground in fall)
*Rudbeckia fulgida 'Goldsturm' / Black-Eyed Susan (prune to ground in fall)
*Salvia leucantha 'Midnight' / Velvet Sage (prune to ground in winter)
Zauschneria californica / California Fuschia

Bulbs

Amaryllis belladonna / Naked Lady
Crocus speciosus, vernus / Crocus
Narcissus hybrids / Daffodil

Artificial Turf and Flowers

(allowed in Civic Center and Gateway Focus Areas if allowed by the ACRB)
Produced by various manufacturers
ForeverLawn West Inc., etc.

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G. [www.wikipedia.org:Quercus ilex rotundifolia.jpg](http://www.wikipedia.org:Quercus_ilex_rotundifolia.jpg), by Chrischan

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Nerium oleander
'Petite Pink'



Dianella caerulea
'Little Becca'



Quercus ilex G.



Pyrus calleryana
'Chanticleer' D.

EXAMPLE PLANT COMBINATIONS

Combination A (formal building entry)

Pyrus calleryana 'Chanticleer' / Flowering Pear
Quercus ilex / Holly Oak
Dianella caerulea 'Little Becca' / Dwarf Flax Lily
Myrtus communis 'Compacta' / Dwarf Myrtle
Nerium oleander, 'Petite Pink' / Dwarf Pink
Phormium tenax 'Tiny Tiger' / Dwarf New Zealand Flax



Juniperus procumbens H.
'Nana'



Camellia sasanqua I.



Agapanthus africanus B.
'Peter Pan'



Acer rubrum
'Bowhall', 'October Glory', 'Red Sunset' J.

Combination B (pedestrian plaza with trellis)

Acer rubrum 'Bowhall', 'October Glory', 'Red Sunset' / Red Maple
Agapanthus africanus 'Peter Pan' / African Blue Lily
Camellia sasanqua / Sun Camellia (espalier)
Clytostoma callistegioides / Violet Trumpet Vine
Juniperus procumbens 'Nana' / Dwarf Garden Juniper
Phormium tenax 'Flamingo', 'Jack Spratt', 'Tom Thumb', 'Tiny Tiger' / New Zealand Flax



Phormium tenax
'Tom Thumb'



Aspidistra elatior



Prunus cerasifera
'Krauter Vesuvius'



Pistacia chinensis
'Keith Davey'

Combination C (garden like spaces for dormitory areas)

Pistacia chinensis 'Keith Davey' / Chinese Pistache
Prunus cerasifera 'Krauter Vesuvius' / Purple Plum
Aspidistra elatior / Cast Iron Plant (shade)
Coleonema pulchrum 'Sunset Gold' / Breath of Heaven
Lavandula angustifolia 'Hidcote', 'Munstead' / English Lavender
Liriope muscari / Lily Turf (shade)



Lavandula angustifolia K.
'Hidcote', 'Munstead'



Liriope muscari



Pyracantha



Pyrus calleryana D.
'Aristocrat'



Magnolia grandiflora L.
'Samuel Sommer'

Combination D (Formal street / Boulevard)

Magnolia grandiflora 'Samuel Sommer' / Southern Magnolia
Pyrus calleryana 'Aristocrat' / Flowering Pear
Pyracantha 'Red Elf' / Dwarf Pyracantha
Rhaphiolepis indica 'Ballerina', 'Pinkie' / Dwarf Pink Indian Hawthorn



Rhaphiolepis indica E.
'Ballerina', 'Pinkie'



Dianella revoluta
'Baby Bliss'



Lagerstroemia faurei x indica



Albizia julibrissin

Combination E (artificial lawn)

Albizia julibrissin / Silk Tree
Lagerstroemia faurei x indica (Indian hybrids) / Crape Myrtle
Dianella revoluta 'Baby Bliss' / Dwarf Flax Lily
Dietes vegeta / Fortnight Lily
Rosa 'Flower Carpet' (white or yellow) / Flower Carpet Rose



Dietes vegeta

ACRB REVIEW PROCESS

The ACRB consists of the following members:

- Base Civil Engineer
- Deputy Base Civil Engineer
- Programs Flight Chief
- Base Architect
- Community Planner
- BCE Project Manager for the specific project under consideration

The ACRB is chaired by the Base Civil Engineer.

Review Process

All projects will be submitted to the ACRB for review. Submittal to the ACRB is done by the BCE Project Manager for the project under consideration.

Depending on the type of project, the ACRB will determine the appropriate representatives to conduct the review. For example, smaller projects and renovation projects may be reviewed by the Base Architect and BCE Project Manager only.

The ACRB will decide what review is appropriate for individual projects. Projects may be reviewed at the following design stages:

Requirements Document/Programming Phase:

- Scope
- Goals
- Budget
- Colors
- Site Inventory/Site Analysis
- Coordinated with Subarea Development Plans
- Coordinated with Other Planning Documents and Policies
- Preliminary Solutions Allow for Full Compliance of FEG (design not finalized until concept design is complete)
- Project Description
- Materials
- Equipment
- Adjacent Facilities Photos
- Future Project Considerations

Concept Design:

Building

- Style/Form
- Proportions
- Wall Systems
- Lighting
- Entrances
- Scale
- Materials
- Details
- Signs
- Windows/Doors
- Massing
- Colors
- Ancillary Structures
- Roof Systems

Site Development

- Siting
- Lighting
- Furnishings
- Setbacks
- Signs
- Landscape
- Utilities
- Screens/Enclosures
- Future Expansion Considered

Circulation

- Roads
- Lighting
- Parking
- Paths/Walks
- Signs
- Landscape

Final Design:

- Final design remains consistent with approved concept design and elements listed above
- Materials/Color Board (interior and exterior)
- Rendering
- Catalog Cuts
- Architectural Details
- Landscape Development
- Construction Documents
- Fascia/Gutters/Downspouts
- Cost Reduction Proposal (if necessary) Comply with FEG
- Coordinated with Other Planning Documents and Policies
- Coordination/Organization of Mechanical and Electrical Elements

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December 2008