

# VULTURE MOUNTAINS REGIONAL PARK AND RECREATION AREA MASTER PLAN

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## Appendix D

### Theming

Excerpt from  
*"The Built Environment Image Guide for the National Forests and Grasslands"*  
United States Department of Agriculture, Forest Service, FS-210, September 2001



United States  
Department of  
Agriculture

Forest Service

FS-710  
September 2001

# The Built Environment Image Guide

## FOR THE NATIONAL FORESTS AND GRASSLANDS

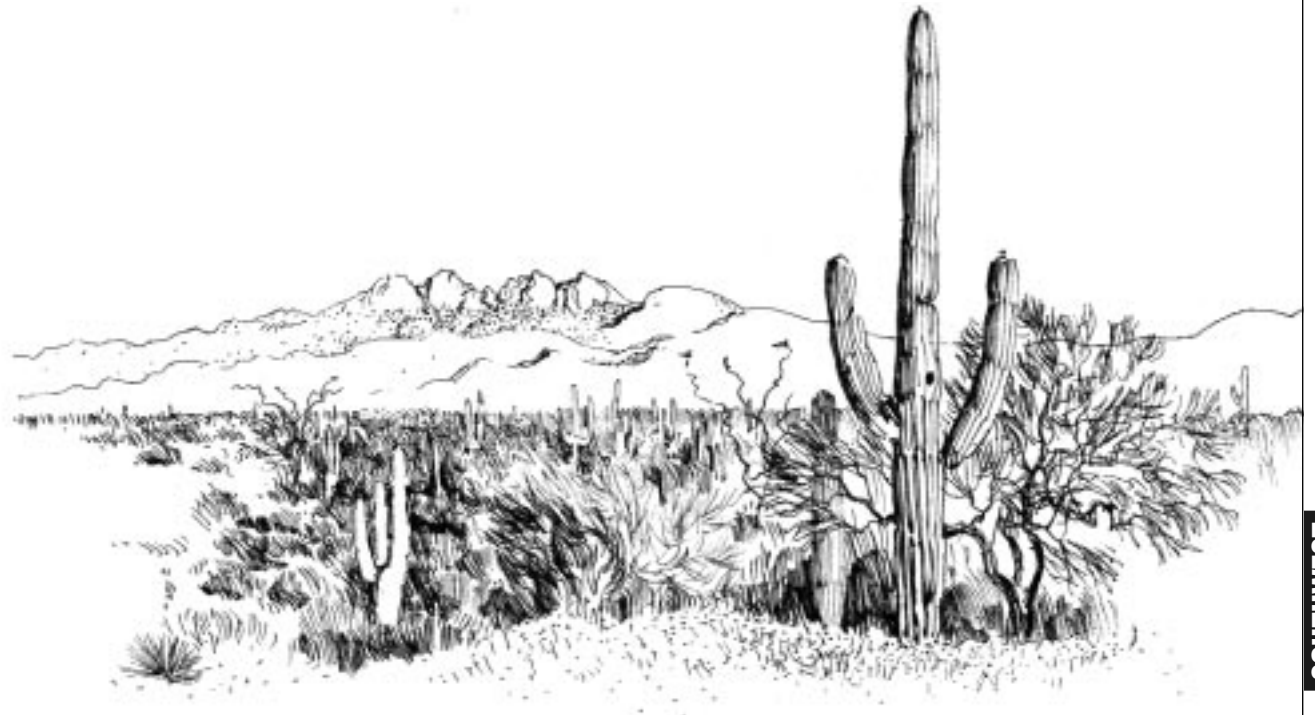


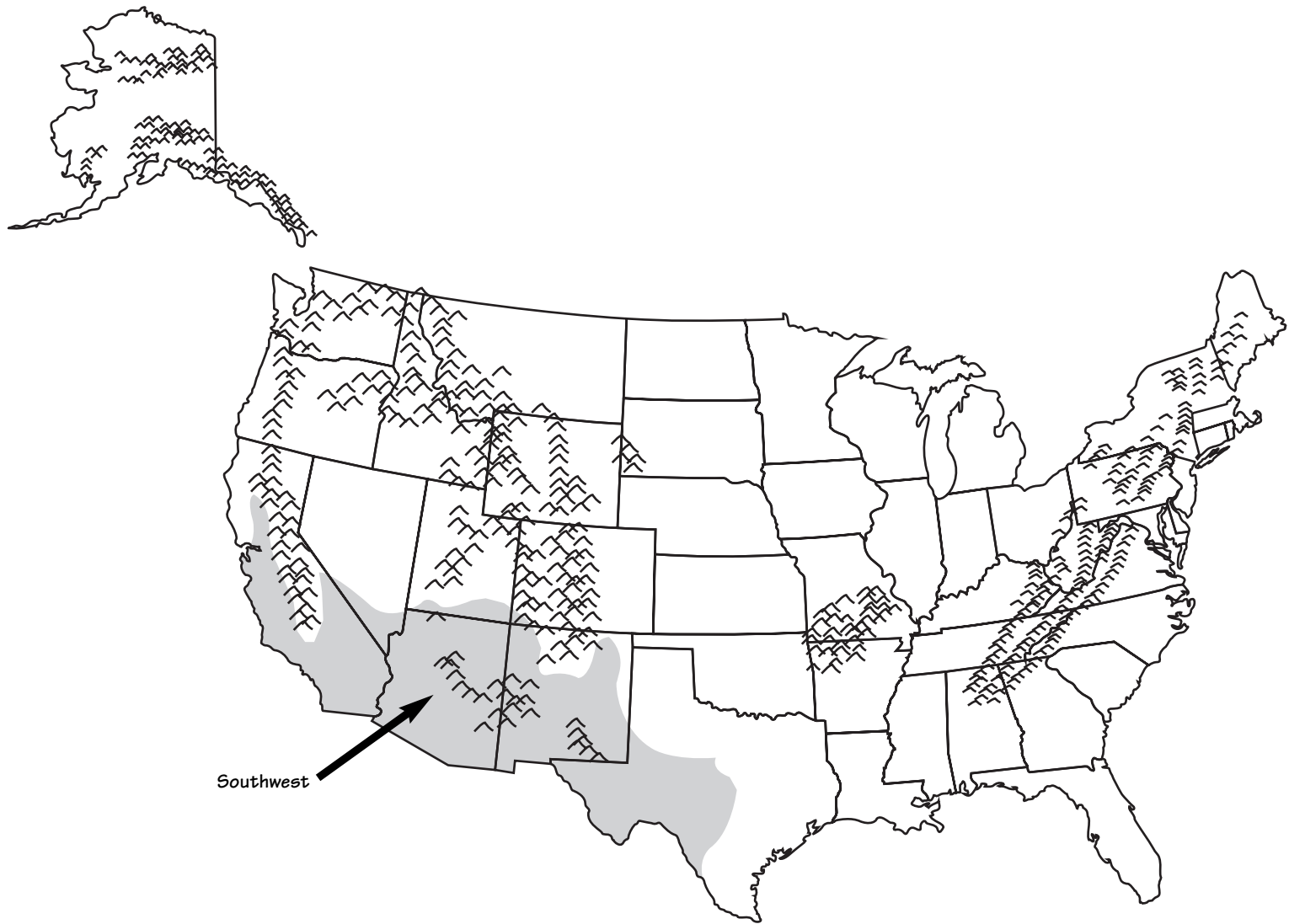
Chapter 4.8

## The Southwest Province

*“Over time the forced weave of the two [Spanish and Native American] cultures took hold. There was enough of the Old World that the New World liked.”*

—Timothy Egan





## OVERVIEW: CHARACTER OF THE SOUTHWEST PROVINCE BUILT AND NATURAL ENVIRONMENTS

The Southwest's natural environment ranges from semiarid to extremely arid. Torrid summers give way to bitter cold winters. The relative lack of timber and abundance of stone has helped shape a distinctive regional design.

The Southwest Province is home to the oldest building traditions in the United States. When Spanish explorers arrived in the 1500's, they encountered native pueblo settlements already hundreds of years old and Anasazi ruins that are the oldest structures on the continent. Influences on Southwest design include the Native American building model that influenced

Spanish colonists. From southern California to central Texas, centuries of Spanish-Mexican presence created a design heritage well adapted to climate, geography, and scarcity of water. Built forms often are simple but exquisitely scaled and detailed. In today's Southwest, visible remains of Native American and early European settlement are preserved and celebrated. These design traditions endure in contemporary structures.

Although diverse, the Southwest contains a strong, unified sense of cultural identity. Cultural traditions remain alive because the source

cultures are still vital. For example, reservations in the province host dozens of sovereign Indian nations. Many landowners can trace their ancestral properties to land grants made by Spanish kings.

The air-cooled, post-World War II era brought an influx of residents from other parts of the country, particularly to booming cities like Albuquerque, Los Angeles, Tucson, and Phoenix. They have imported their own expectations and tastes.



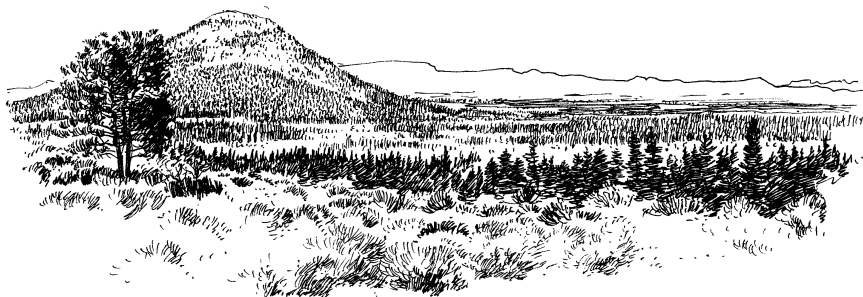
## INFLUENCES ON ARCHITECTURAL CHARACTER

### LANDSCAPE AND ECOLOGICAL

Southwestern ecosystems embrace a range of landscapes from tundra to grasslands. Drought and fire are dominant influences. Only 4 percent of the land in the Southwest is riparian. These ribbons of green are highly valued and sometimes contested by competing interests.

The province contains six landscape character types. From California to Texas, these share the characteristics of vast skies, long vistas, and a strong horizontal line. The land forms are plateaus, mountains, valleys, plains, and canyons. Vegetation creates washes of color varying from olive-drab scrublands to gray-green woodlands. Geology adds grays and the deep reds of dramatic sandstone formations. Landscape character types include:

**Desert and  
Desert Mountain**



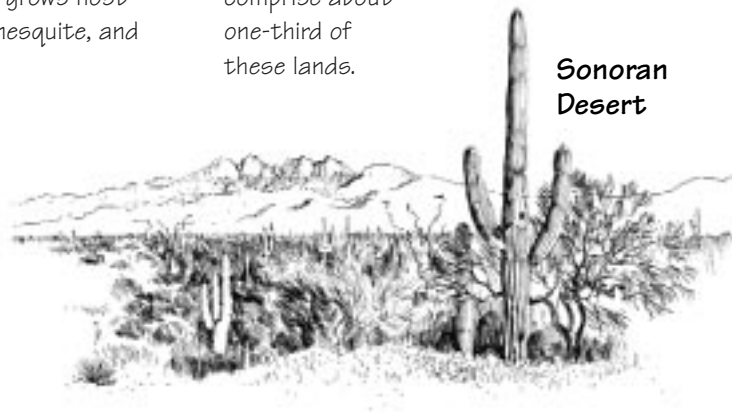
The *Mexican Highlands*, a vast area of Arizona and New Mexico, roughly is divided into one-third mountains and two-thirds plains and grasslands. Drained by V-shaped ravines, the mountains of the Mexican Highlands feature bold escarpments and outcrops. Dry washes called arroyos drain the plains. Vegetation varies from coniferous forests at higher elevation, to woodland, to desert shrub.

The *Sonoran Desert* dominates southwest Arizona. Like the Mexican Highlands, the area combines mountains with canyons and plains drained by arroyos. The Colorado River is the principal waterway. Mountains are relatively low and barren with many exposed rocks. The plains are relatively barren. Areas with no ground cover plantings are justly called “desert pavement.” But places where Saguaro cactus grows host a rich complement of palo verde, mesquite, and prickly pear.

The *Tonto* makes a transition between the desert floor and the Colorado Plateau. This is a landscape of coniferous forests, deciduous woodlands, desert shrub, chaparral grasslands, palo verde, and cholla cactus. Geology is epitomized by the dramatic red-rock formations of Sedona, Arizona. The principal rivers are the Verde and Salt rivers with dry washes draining the foothills.

In California, the *Southwest Mountain and Valley* is crossed by earthquake faults and dominated by chaparral grasses that can grow 10 feet tall. The province stretches from San Luis Obispo County to the north to the Mexican border and from the undulating coastal plains to three rugged mountain ranges: the Transverse, the Peninsular, and the Southern Coastal. National forests comprise about one-third of these lands.

**Sonoran  
Desert**



This landscape generally is semiarid with forested stands limited to higher elevations. It is dissected by canyons and riparian areas.

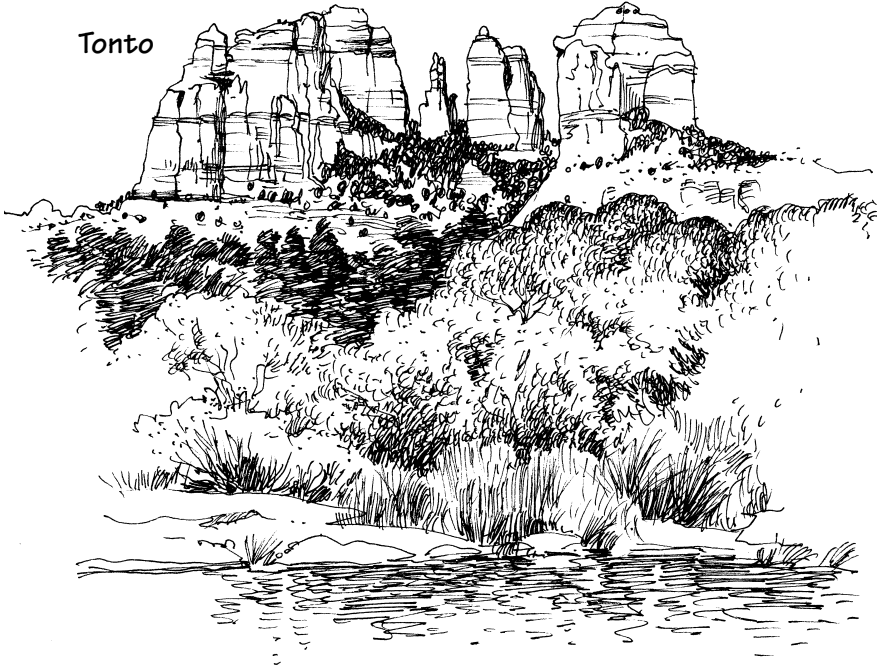
The *Desert* and *Desert Mountain* includes southeastern California from the Mexican border and Nevada to the eastern base of the Sierra Nevada, Peninsular, and Transverse mountain ranges. Parts of the Colorado and Mohave deserts fall within this province. Elevations range from below sea level in Death Valley to 14,242 feet on White Mountain Peak. This landscape character

type is typified by long views across sagebrush and shadscale or creosote bush. Alkali flats and bare peaks may be visible in the distance. Open stands of Joshua trees are common. Pinyon-juniper woodlands cover the foothills and lower mountain slopes. Bristlecone pines grow at elevations above 10,000 feet.

The *Sierra Foothills* and *Low Coastal Mountains* include low hills at the base of the Sierra Nevada and Cascade ranges as well as a major portion of the Coastal Range. The Sierra foothills and

eastern Coastal Mountains are typified by oak woodlands, rounded hills, and chaparral-covered slopes. Trees range from 15 to 70 feet tall. Several major rivers and canyons bisect the province. The green hills of winter turn gold with fields of poppy and lupine in summer. The western Coastal Range rises to 5,000 feet with dense forests of pine, fir, and oak. Madrone cover north- and east-facing slopes, and chaparral grasses cover west- and south-facing slopes.

Tonto



Sierra Foothills/Low Coastal Mountains

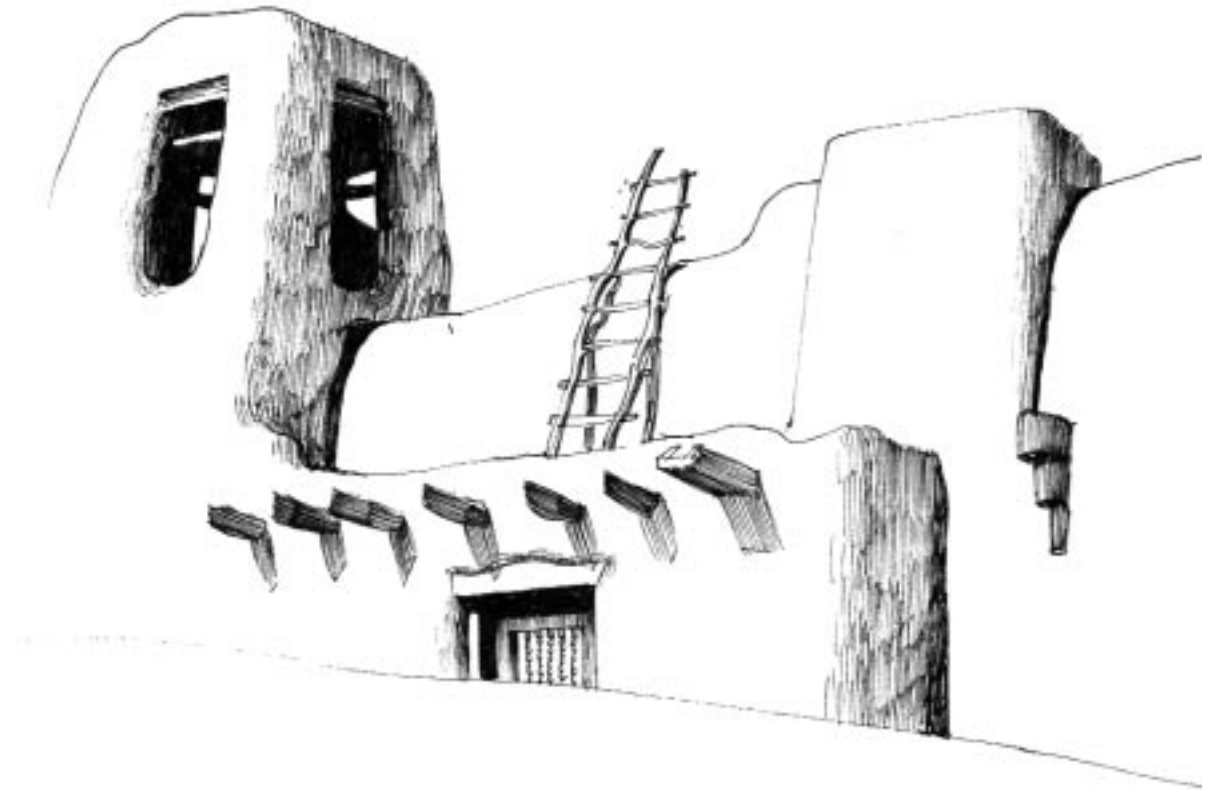


## CULTURAL

*Native American:* Early Native Americans in Arizona, New Mexico, and southwestern Colorado built the province's first permanent structures—modified caves and rock shelters. Eventually the Anasazi groups built surface dwellings such as pit houses. Between 700 and 900 A.D., they developed above-ground masonry dwellings that eventually were joined to form small villages. Anasazi architecture reached its peak between 1150 and 1350 in the great multistoried pueblos such as those in the Four Corners area. Perhaps due to droughts, the Anasazi dispersed. Their descendants built plaza-centered pueblos of stone or puddled adobe. The Taos, Acoma, Zuni, and Hopi pueblos date to this period.

*Spanish Colonial:* The first permanent Spanish colonists occupied an abandoned pueblo near the Rio Grande River and modified it with Spanish-type doors and windows. In 1610, Governor Don Pedro de Peralta established Santa Fe under a town plan that followed a mandate called the Law of the Indies. The code dictated that all Spanish colonial towns contain a central plaza with public, commercial, and institutional buildings (such as churches) facing the plaza. Residences were built along a grid pattern of streets extending from the plaza.

The Pueblo Indian Revolt of 1680 forced the Spanish to flee to the El Paso valley. When the Spanish returned, they fortified buildings and



churches against further Indian attack. For example, they built enclosed complexes with smooth windowless exterior walls. Their buildings included such defensive features as parapets, *tronerias* (gun ports), and *torreones* (lookout towers).

*Mission Style:* Spanish Colonial missions and churches were a continuing influence on later Southwest design. Unlike the adobe structures of the pueblos, these missions were built of stone. Their construction derived almost entirely from European designs.



*Territorial Style:* After the Gold Rush of 1849, Americans surged into California on overland routes like the Santa Fe Trail. The new settlers adopted methods that served the Spanish well in the arid Southwest, but they added decorative elements from “back East.” Milled woodwork added to flat-roofed adobe houses spawned the Territorial style, so named because Arizona and New Mexico, where this trend predominated, remained territories into the 20th century.

*CCC-Rustic:* During the 1930’s, the WPA, CCC, and other Federal relief programs built civic buildings and public works throughout the country. In the Southwest, WPA-era buildings adopted Spanish Colonial, Pueblo, and Territorial Revival styles. They used domes, curvilinear parapets, vigas, canales, and stucco. The “rustic” idiom was evident in parks, forests, and outdoor recreational areas.

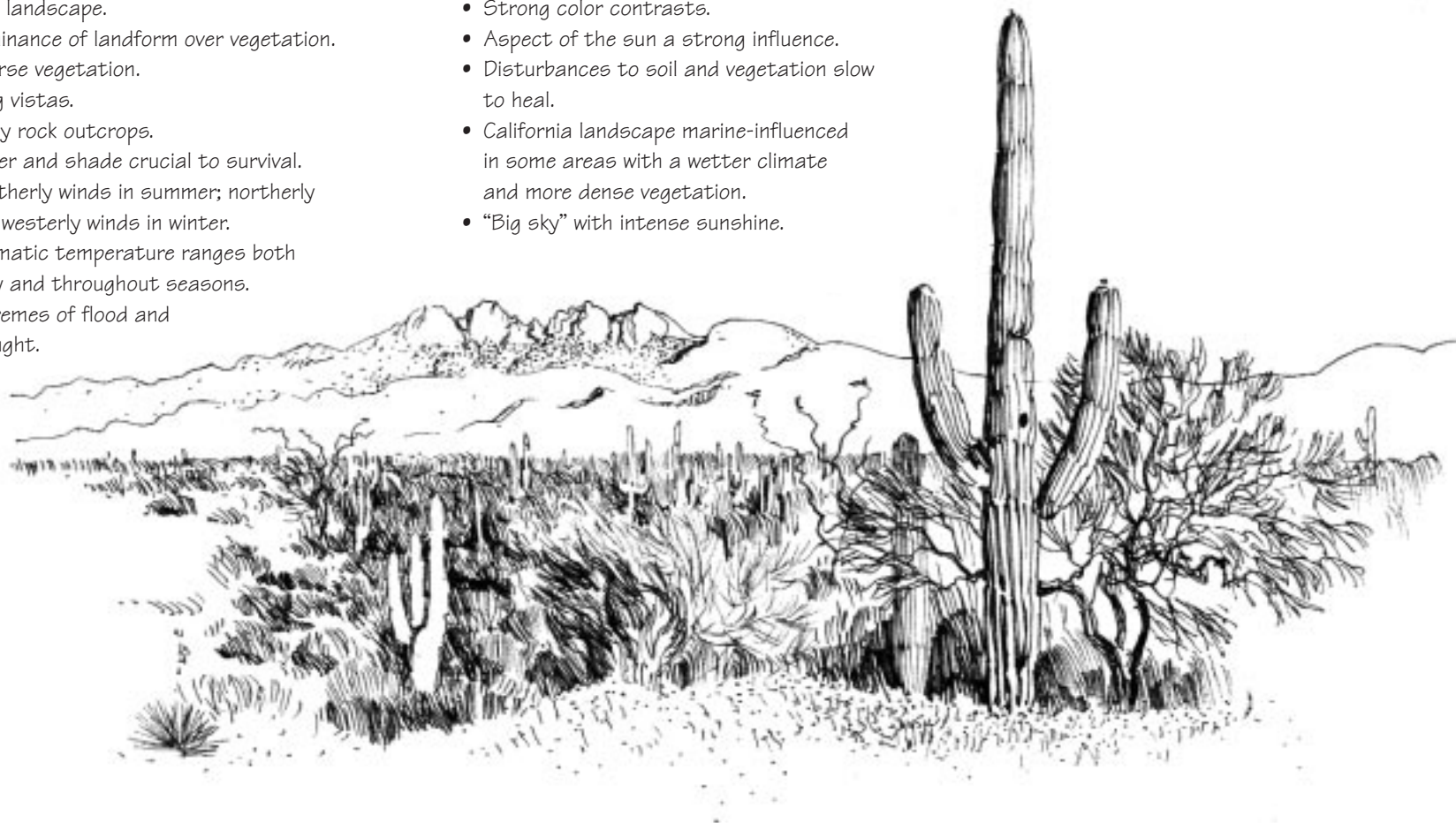
*Materials:* Adobe was not the only indigenous building material. Clay beds along the lower Rio Grande provided raw material for local brickmaking operations from the 1860’s to the present. Generations of Mexican and Mexican-American artisans have built distinctive brick dwellings, churches, and commercial buildings on both sides of the Rio Grande from Laredo to Brownsville.



## SUMMARY OF INFLUENCES AND RESPONSES THAT SHAPE THE CHARACTER OF THE BUILT ENVIRONMENT

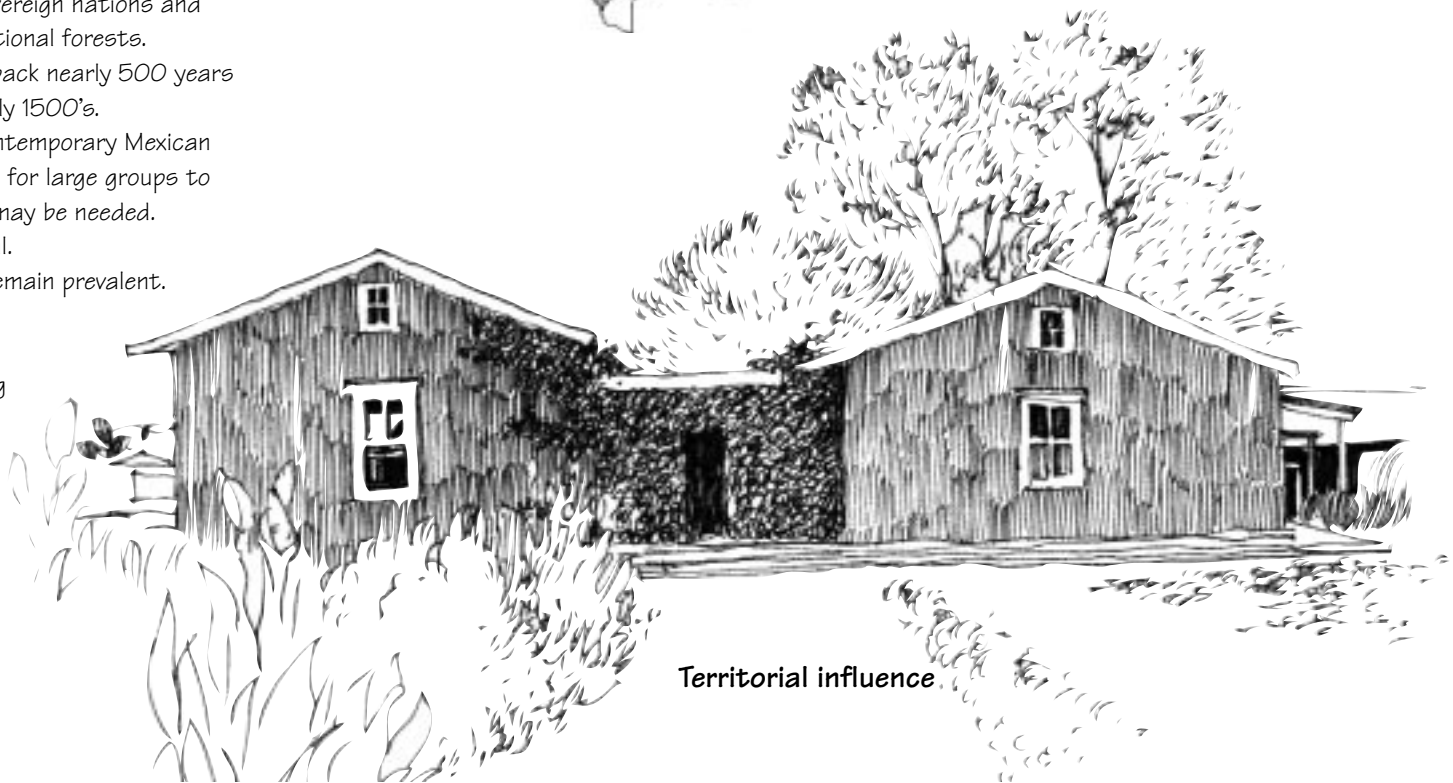
### ECOLOGICAL INFLUENCES

- Hot, dry climate.
- Arid landscape.
- Dominance of landform over vegetation.
- Sparse vegetation.
- Long vistas.
- Many rock outcrops.
- Water and shade crucial to survival.
- Southerly winds in summer; northerly and westerly winds in winter.
- Dramatic temperature ranges both daily and throughout seasons.
- Extremes of flood and drought.
- Ecosystems dependent on fire for renewal.
- Strong color contrasts.
- Aspect of the sun a strong influence.
- Disturbances to soil and vegetation slow to heal.
- California landscape marine-influenced in some areas with a wetter climate and more dense vegetation.
- “Big sky” with intense sunshine.



## CULTURAL INFLUENCES

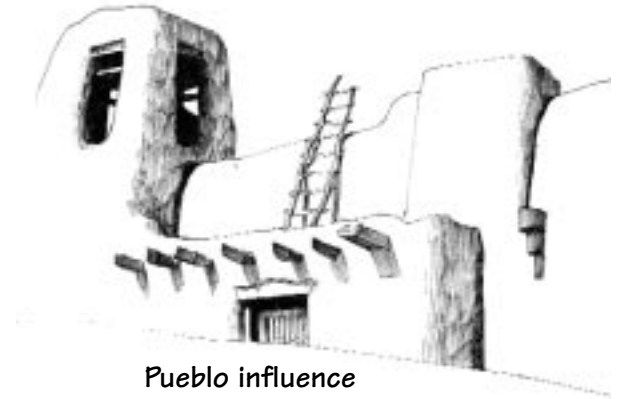
- Area has a highly urban population, with few people living outside cities.
- Forest Service areas receive year-round use.
- Three main cultural groups are Anglo, Native American, and Hispanic.
- People are attracted to the higher, cooler places and to water for recreation.
- Native American cultures are highly visible, with more than 30 sovereign nations and reservations within national forests.
- Spanish culture goes back nearly 500 years to explorers of the early 1500's.
- Strong influence of contemporary Mexican culture requires places for large groups to meet; larger facilities may be needed.
- Society is multicultural.
- Ranching and mining remain prevalent.
- The area has many archeological sites.
- The area is experiencing rapid population growth.



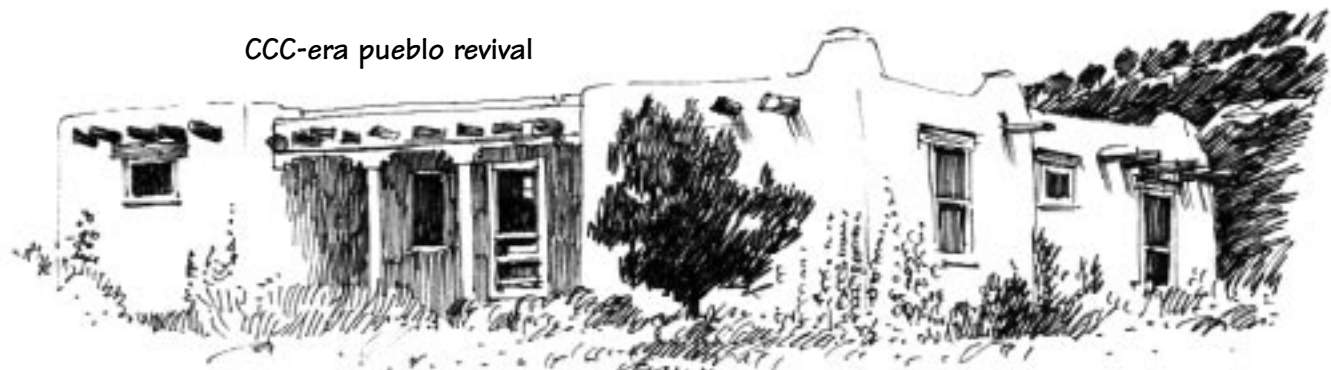
Territorial influence



Spanish Colonial influence



Pueblo influence



CCC-era pueblo revival

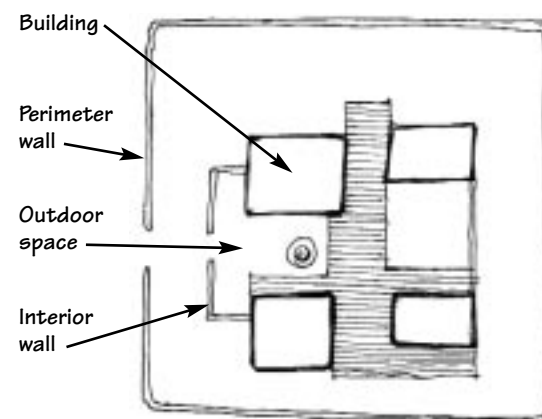
## ARCHITECTURAL GUIDELINES FOR THE SOUTHWEST PROVINCE

### SITING

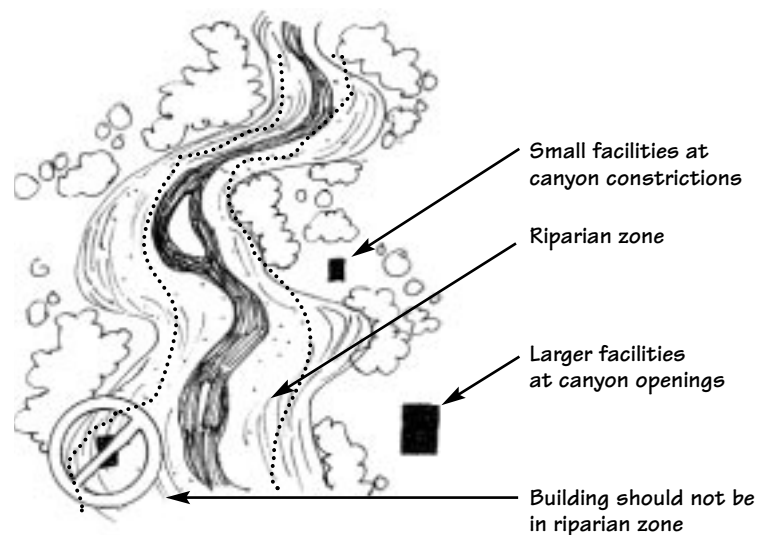
- Choose site based on the availability of shade.
- Use traditional courtyards to provide shade and cooling for year-round use.
- Use traditional L-shaped or U-shaped courtyards, particularly as entryways.
- Cluster different building functions around courtyards.
- Plant shade trees on west side.
- Locate buildings for views and access to water.
- Avoid riparian areas—direct people to the water with trails, but do not locate facilities there.
- Locate parking farthest from water in riparian areas.
- Locate public facilities back from the rim of canyons or on a bench above the riparian zone.
- Site entries on south side to create potential courtyards and seating.
- Select site based on the form of the land; for example, site structures to match the horizontal plane of the landscape.
- Buffer parking from buildings to keep buildings cool.

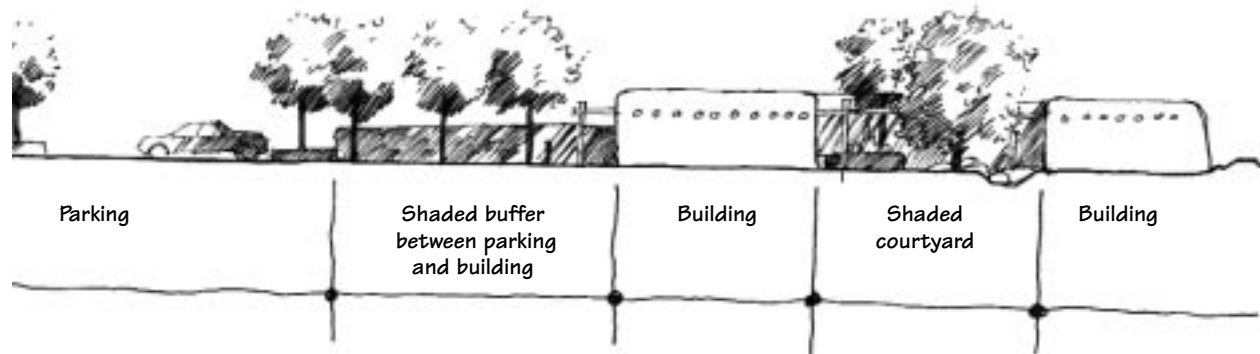
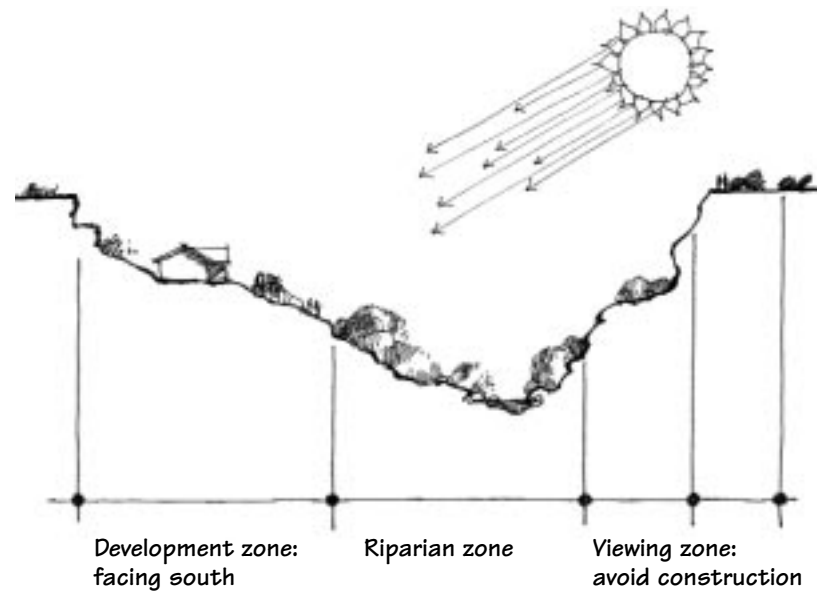
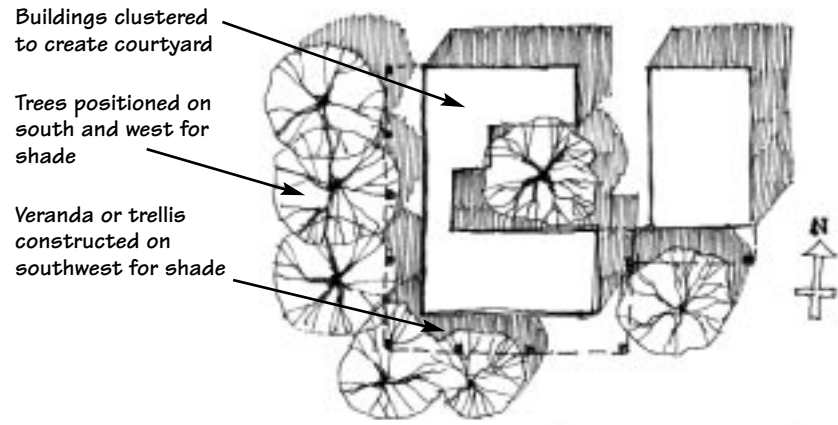
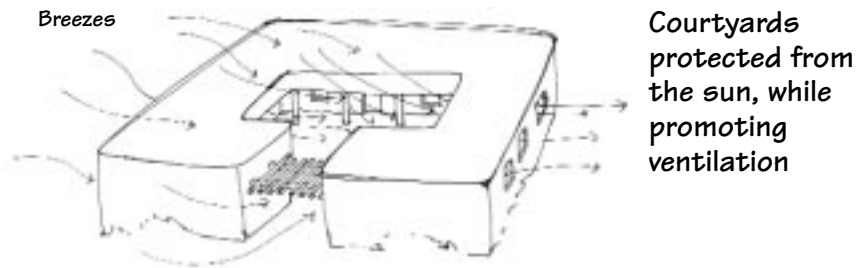


Courtyard with water feature for evaporative cooling



Buildings and walls create outdoor rooms



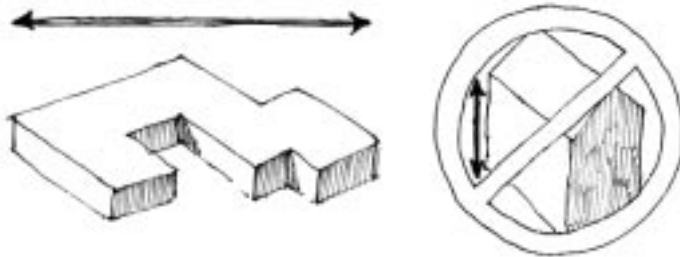


## MASSING AND SCALE

- Structures are usually low, horizontal, blocky, and rectilinear.
- Blocky, massive, rectilinear forms create texture and shade.
- Terraced, stepped massing fits into landscape better and is preferable to one solid block.
- Simple wall masses are common.
- Rounded, kiva-like building forms can work for “special” places such as spaces for exhibits and ceremonies.

### California Variations:

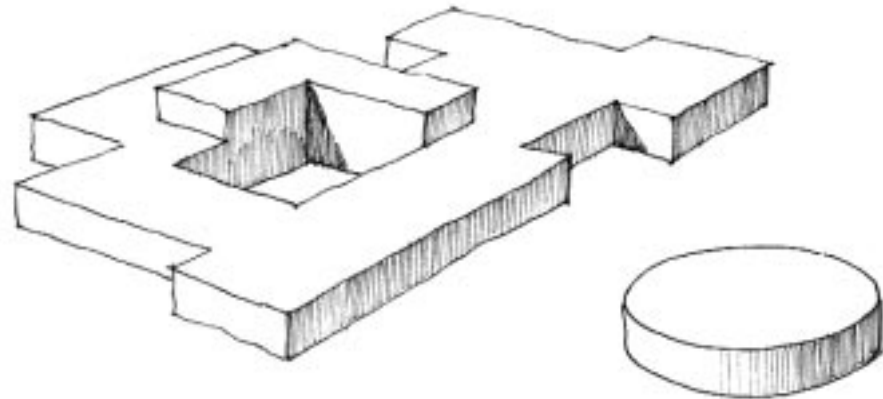
- Foothills evoke taller, more vertical structures, especially in areas with taller oaks and mountain backdrops.
- Roofs and walls are in equal proportion.



Buildings should be kept more horizontal than vertical



Doors and windows used to create human scale

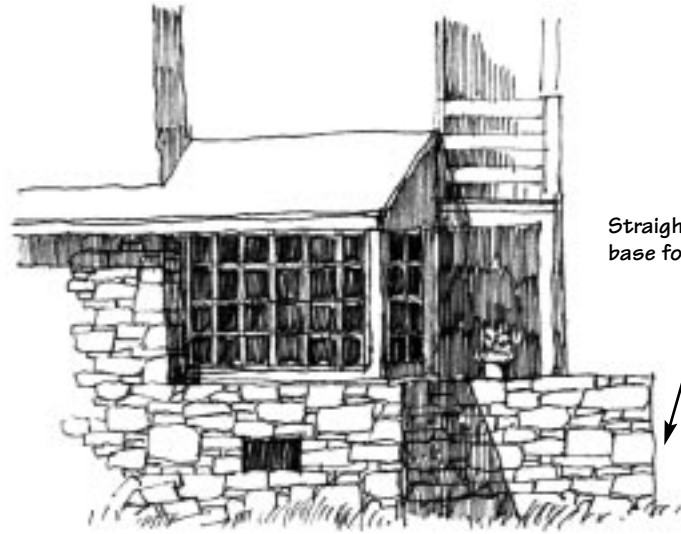


- Low, horizontal, and rectangular massing is appropriate for most structures
- Second story possible
- Corners create added shade

Rounded forms may be appropriate for special and ceremonial functions

## BASE

- Create a solid, firm base as a connection to the ground.
- Design a rock foundation if rocks are prevalent in area.
- Use a stone base for structural columns.
- Avoid an articulated base on level sites.
- Avoid elevation on “stilts.”
- Minimize foundation planting.
- “Band” the base in a different color so mud splash will not show.
- Provide drainage away from structure.
- Design the bottom of the wall wider so that walls appear “stacked” on top.



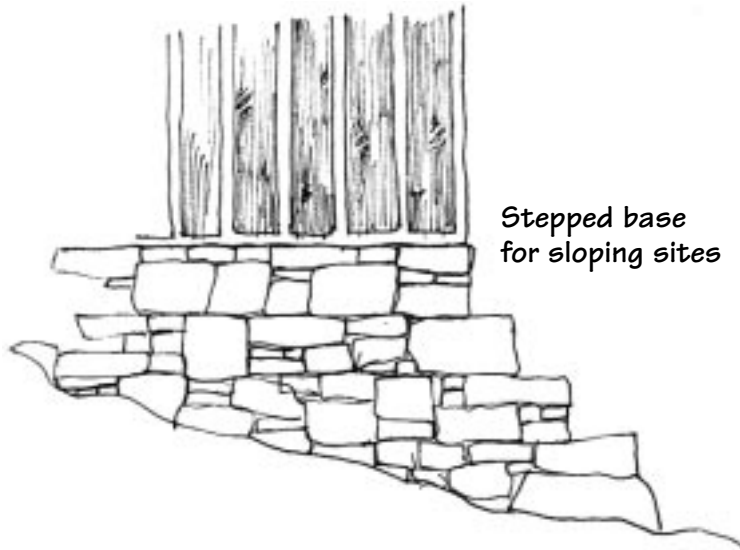
Straight, vertical base for flat sites



Distinctly separate base



Elevating structure off ground



Stepped base for sloping sites



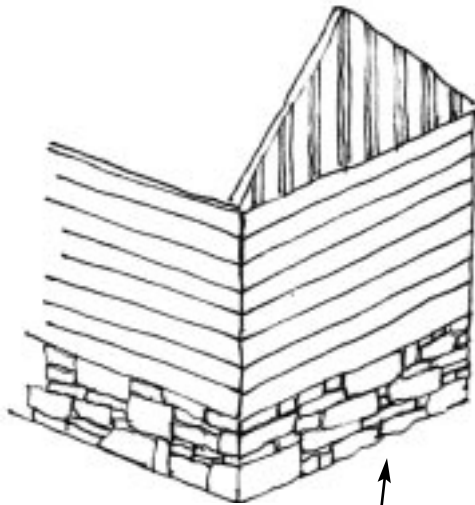
Selectively clear vegetation & slope away from structure for drainage



*California Variations:*

Stone bases are more prevalent in California landscape types.

- Employ more variety in base types.
- Design the base to be more vertical.
- Use a battered base for slopes.



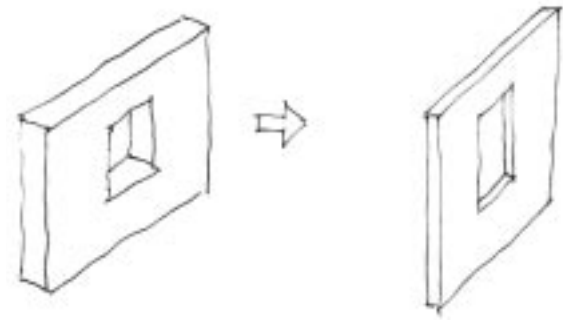
Base created from different natural material in California mountains

**WALLS**

- Walls (including parapets) are dominant in the building composition.
- Walls are monolithic and massive.
- Monolithic, unadorned walls can be accented by wood elements and detailing.
- Walls have soft, rounded edges and corners.
- Caps on walls add texture.
- Variations include buttresses on walls.
- Courtyard walls are extended from the building with the same materials, color, and texture.

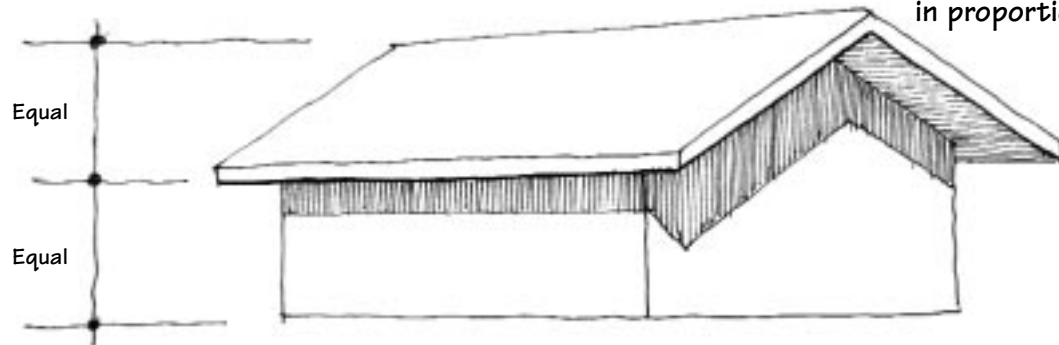
*California Variations:*

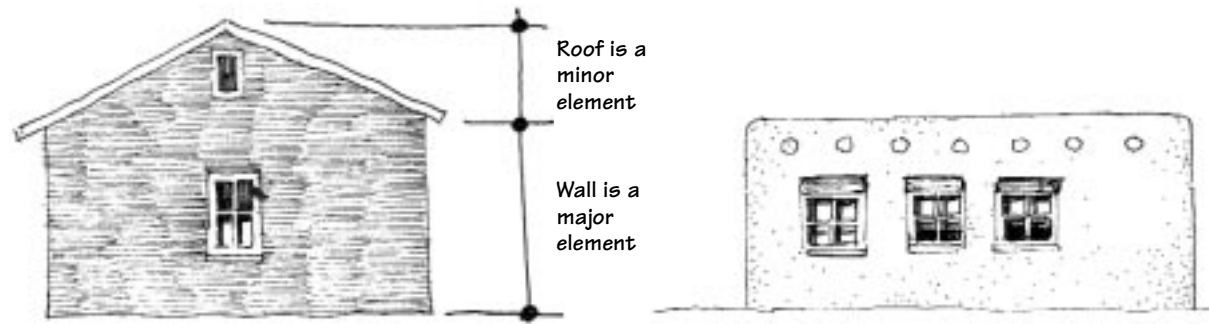
- Walls are thinner.
- Walls are less dominant in composition.
- Resistance to earthquakes is a primary structural consideration.
- Use wood siding if stained rather than painted.
- Limit logs and heavy timbers to structures at higher-elevation sites with more dense vegetation; use moderate-size rather than massive logs.



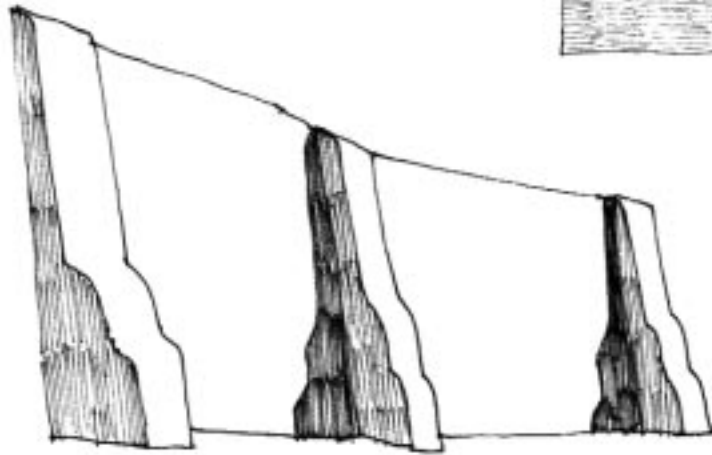
**Walls should be thinner in California mountains due to more temperate climate and greater seismic activity**

**In California mountains, walls are more equal to roofs in proportion**

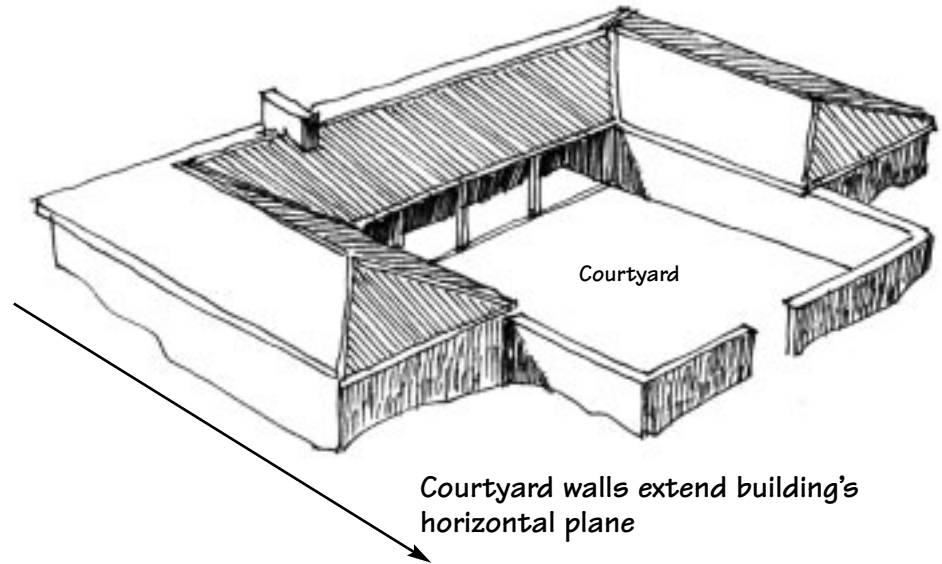




Walls are simple, monolithic without expressed base



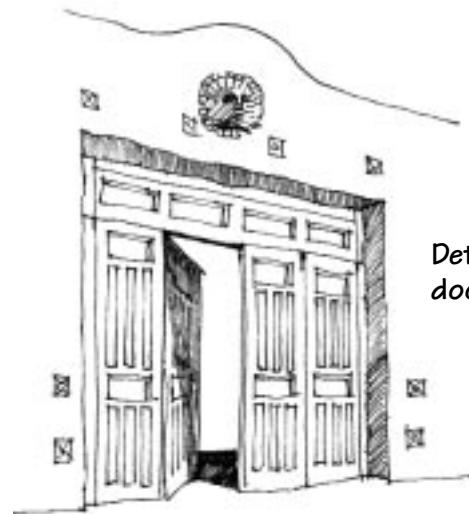
Butresses provide vertical expressions within horizontal wall



Courtyard walls extend building's horizontal plane

## WINDOWS AND OPENINGS

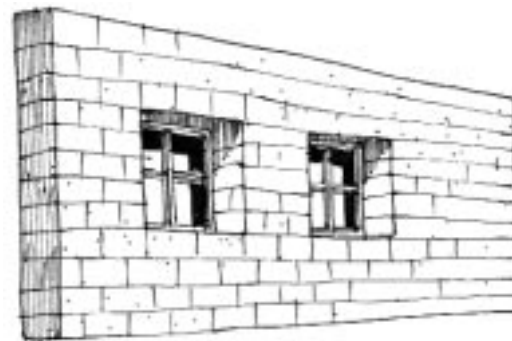
- Use traditional and typical, thick, inset windows, with deep shadows.
- Use smaller, punched openings—more typical than large expanses of glass.
- Place window openings on the northeast and southeast sides.
- Minimize openings on the west side.
- Give preference to operable, double-hung, divided light windows.
- Select tall vertical windows rather than wide, horizontal ones.
- Place windows high on walls to minimize the reflection of light and heat from ground.
- Do not place larger windows on the west or south sides.



Detail at doorway



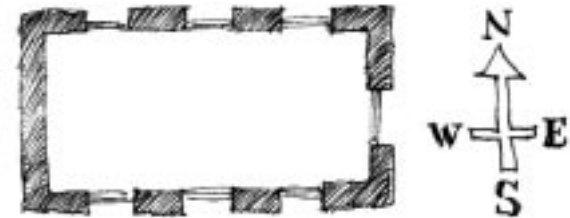
Corner windows



Windows should be recessed within walls



Vertically proportioned openings should be created, whether singular or grouped

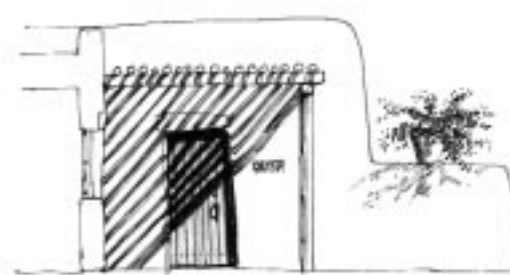


- Windows should be placed on north, east, and south
- Openings should not be on the west

- Include traditional ornament such as decorative tiles and carved wood on doors and windows.
- Avoid horizontal bands of windows.
- Avoid windows at corners.
- Use exposed lintels—a structural element that is also a cultural element—over openings.
- Use shade structures such as trellises and pergolas.
- Avoid awnings.
- Include verandas and porches.

*California Variations:*

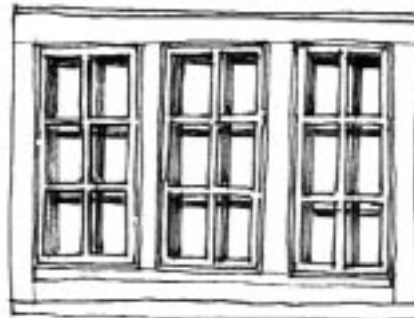
- Arched or detailed doorways and portals are more common.
- Windows are not recessed.
- More and larger windows are suitable.



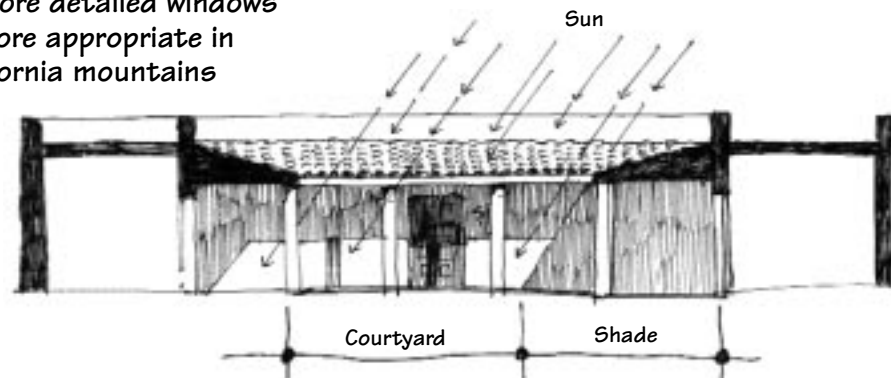
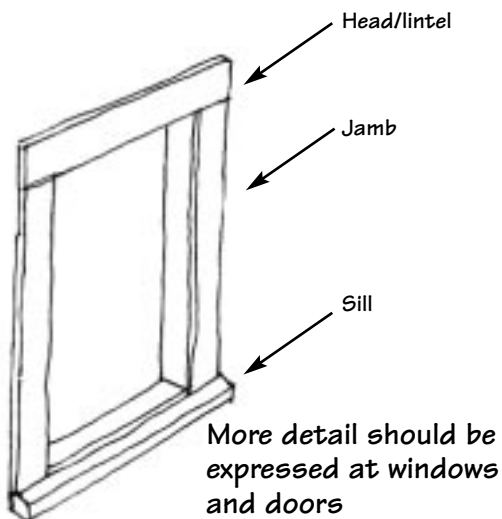
**Shade created with trellis elements**



**Door frame flush with wall**



**Larger, more detailed windows are more appropriate in California mountains**



**Courtyards used to create shaded areas**

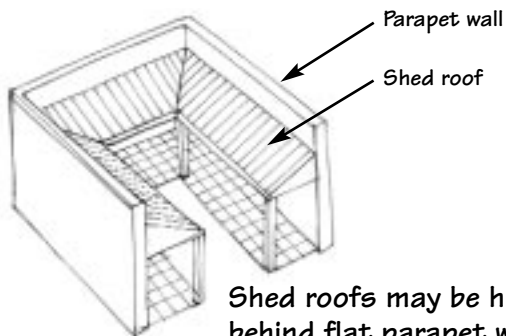
## ROOFS

Flat roofs are a strong cultural tradition in this province, but there are historical precedents for pitched roofs as well. Pitched roofs can improve ventilation, create attic space, curtail vandalism, and reduce maintenance. A suitable hybrid involves hiding a gently sloping roof behind a flat parapet wall.

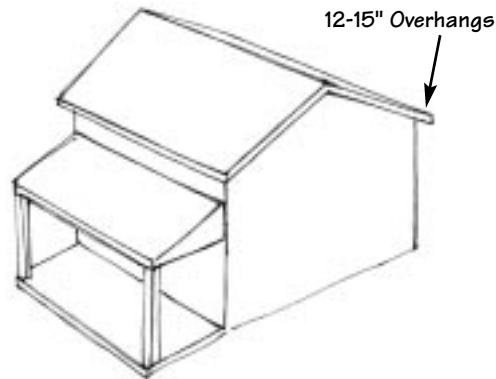
- Use flat roofs within townscapes or in areas with flat topography.
- Use pitched roofs in vegetated areas or within more rolling topography.
- Design roof pitch ranges from 1:12 to 6:12.
- Add shed roofs to create porches.

### California Variations:

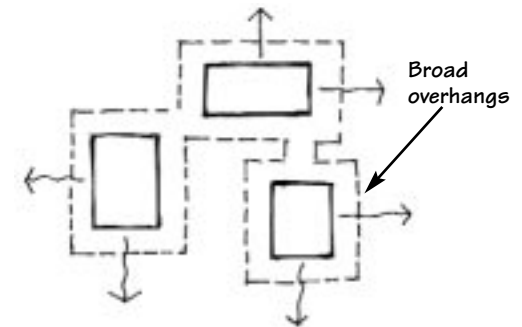
- Use hipped and double-pitched roofs.
- Include larger overhangs.
- Include verandas and porches.



Shed roofs may be hidden behind flat parapet walls



Simple shed forms may be added to steeper-pitched gable forms



In California, broader overhangs should be created that focus views out to the landscape



Flat roofs should be used in flat terrain



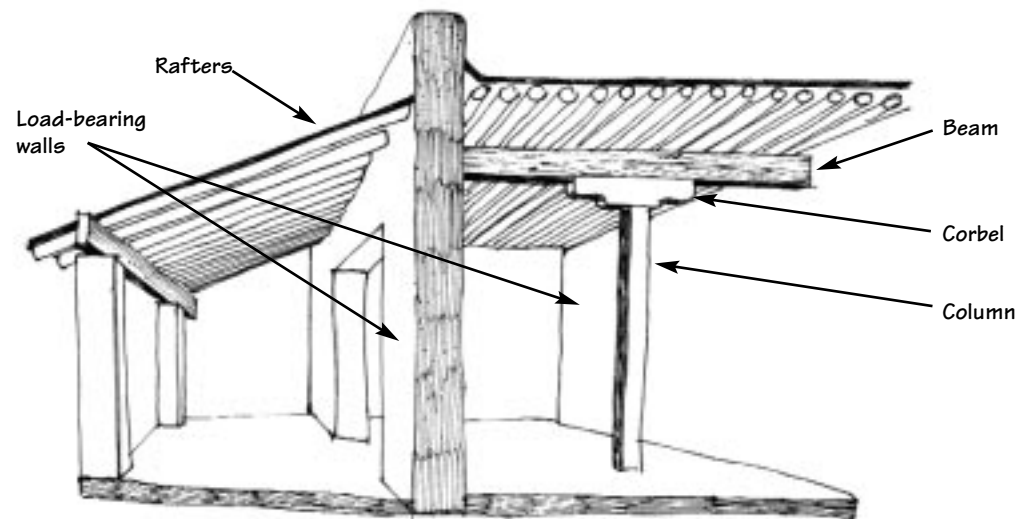
Free-standing sheds



Pitched roofs with a moderate 12–15" overhang should be used in varied mountainous terrain

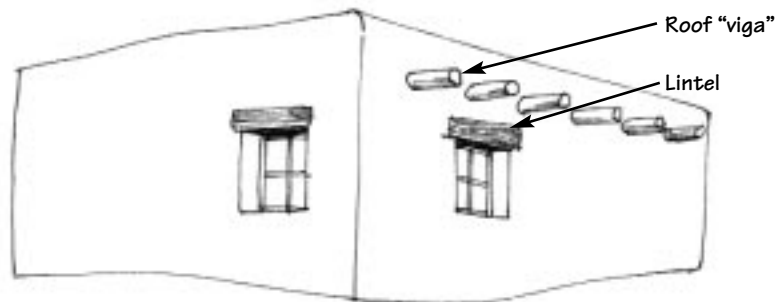
## STRUCTURE

- Create exterior walls that are load-bearing and should appear massive.
- Enclose wall structure but expose roof beams (vigas) and other roof structure.
- Expose ceiling structure, including corbels, beams, and rafters (often decorative).
- Expose lintels over windows.
- Protrude structural timbers through the building.
- Expose massive structures that have less detail; however, lighter structures have more details.
- Use stout and strong columns on ramadas.



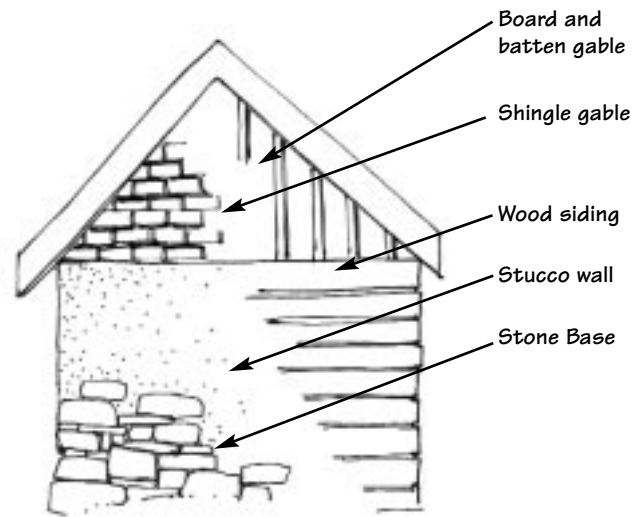
Exposed structure should be limited primarily to roof supports

Structural expression should be limited to roof and possibly window supports



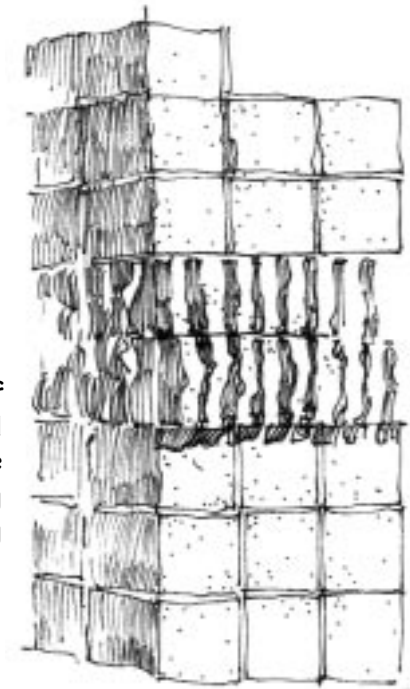
## MATERIALS

- Select natural materials with integral colors that do not need to be painted or stained.
- Make walls from stone, adobe, concrete block, or split-face block.
- Use suitable masonry materials including CMU block, adobe, and stacked flagstone.
- Use strongly textured wall materials to create a pleasing play of light and shadow patterns.
- Make a rough or smooth texture wall to match the scale of setting.
- Use anodized steel to reduce maintenance and as an alternative to wood on exposed structures.
- Use fluted materials to disperse heat.
- Use decomposed granite and concrete to match surrounding earth tones for pathways.
- Use pavers for highly developed areas or in urban areas.
- Avoid materials on horizontal surfaces that attract and retain heat.
- Avoid reflective materials that create glare.
- Avoid exposed wood unless protected from sun.
- Use native or locally produced materials when possible.
- Use metal siding for utilitarian structures.
- Make traditional-style fences and shade structures from small-diameter, collected wood—sometimes called coyote, Mormon, or grapestake fences.



**Materials may be more varied in the California mountains**

**Ornamental use of manufactured split-free concrete block, including fluted detailing**



## ROOF MATERIALS

- Use standing-seam or corrugated metal roofs.
- Use heavy asphalt shingles, concrete tile, and fiber-cement tile.
- Use concrete tile and clay “mission” tile if desired.
- Avoid shake roofs and stamped metal shake roofs.

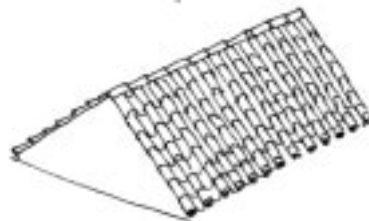
## Appropriate Roofing Materials



Seamed Metal



Composition,  
concrete, or  
fiber-cement  
shingles



(Mission) clay tile



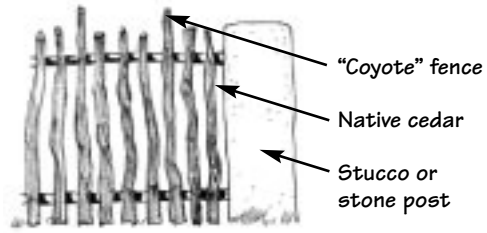
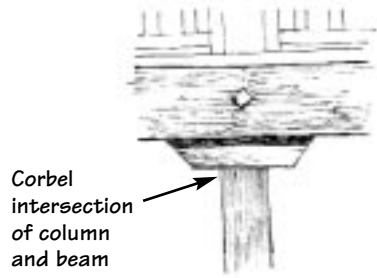
Corrugated metal

## COLOR

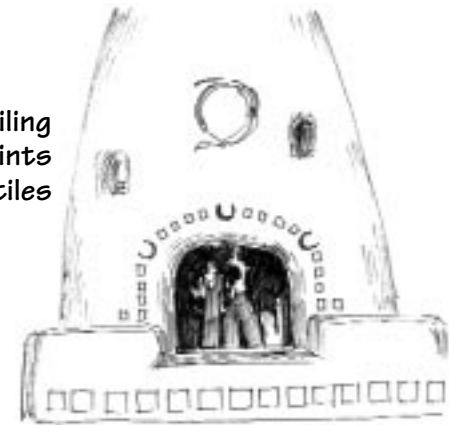
- Make colors slightly darker than landscape precedents as they will fade in the intense sunlight. Dark colors also look lighter in the bright sun.
- Use lighter colors for brightness in interiors.
- Use light, moderate earth tones, including brown, gray, terra cotta, gray-green, olive, and sage.
- Avoid deep, rich greens.
- Avoid reflective colors.
- Use color as an accent in decorative elements such as clay tiles, mosaics, and in door and window frames.
- Use light, bright colors in townscapes.
- Use darker colors in mountains.



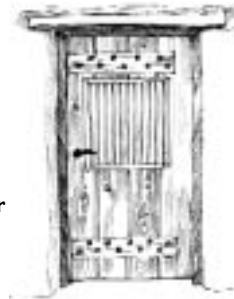
**Concentrate Details at Focal Points**



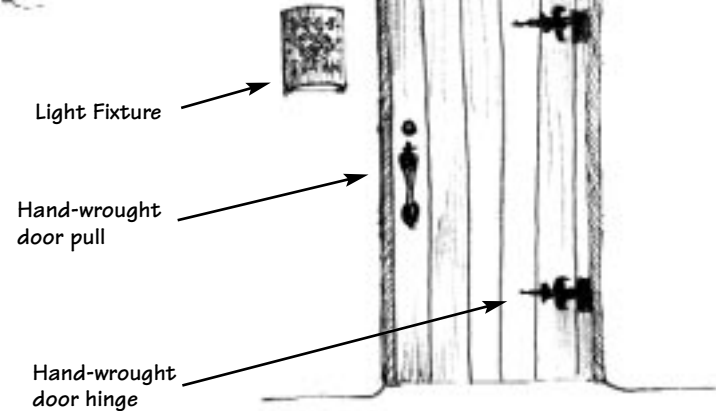
Locating detailing at focal points with handmade tiles



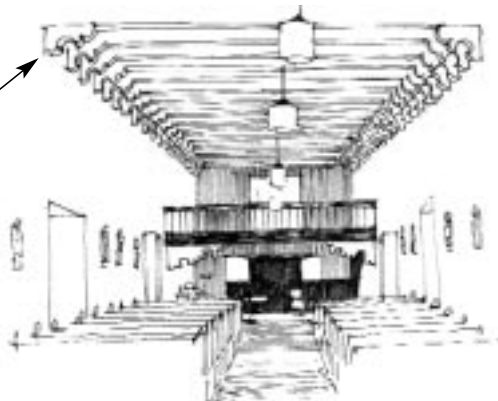
Entry door



Handcrafted fixtures and hardware



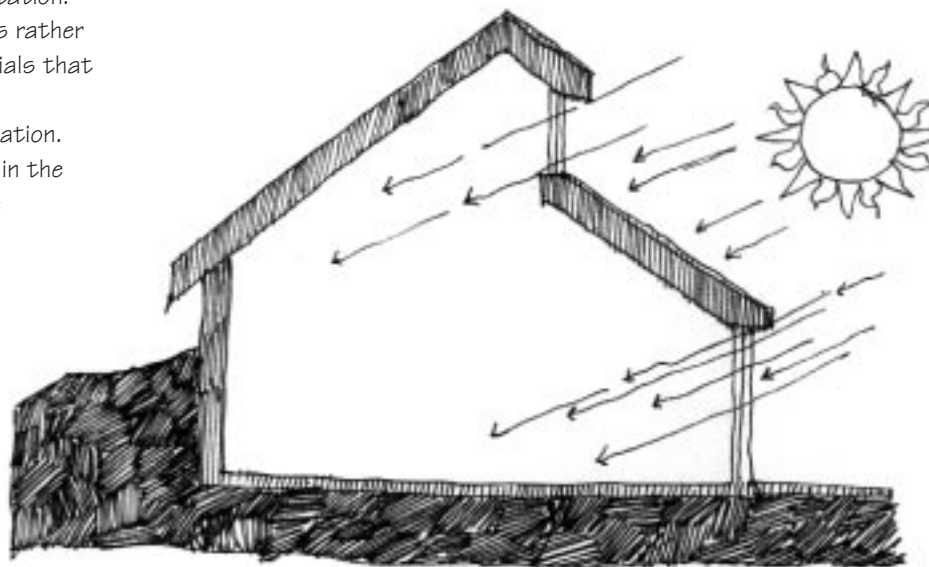
Detail at end of structural members



## SUSTAINABILITY

- Use solar heat and energy—an abundant resource in this area.
- Pursue simple technologies such as passive solar as well as active solar such as photovoltaics.
- Employ solar chimneys for cooling.
- Use evaporative cooling (“swamp coolers”), which is preferable to air conditioning.
- Employ “xeriscape” using drought-tolerant plants.
- Use gravel mulch in landscaping.
- Minimize irrigation.
- Minimize site disturbance.
- Harvest water in cisterns.
- Grade to direct water runoff to vegetation.
- Use locally available natural materials rather than synthetic, manufactured materials that must be imported.
- Recycle graywater for landscape irrigation.
- See the “Common Principles” section in the introduction of this chapter for more recommendations on sustainability.

**Solar gain and daylighting should be maximized**



## SYNTHESIS

Although the structures of the Southwest are powerfully simple in form, they contain a strong tradition of ornament. This is usually highlighted in doors, gates, light fixtures, and handcrafted building hardware. The courtyard tradition, a logical response to the climate, creates opportunities for U-shaped and L-shaped structures as well as comfortable entryways and gardens.

The province's strong light offers high potential for sustainability as the ever-present sun can be harvested for heating and energy. Designers and builders throughout the Southwest have returned to the area's historic roots. From San Diego to Albuquerque, people seek architecture that defines the Southwest as special and distinctive.

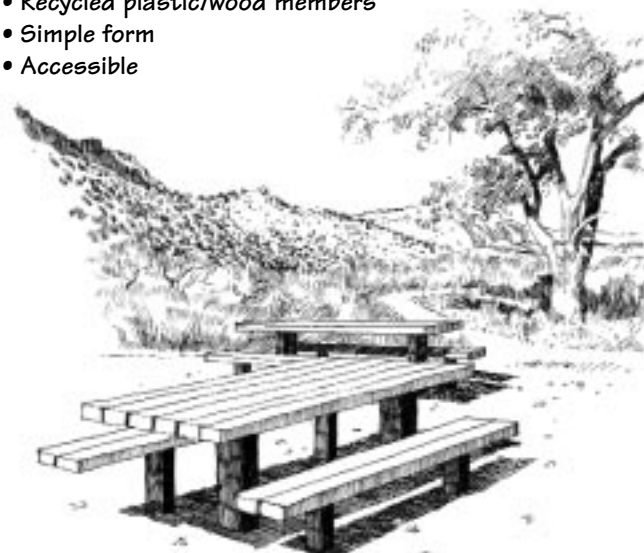


### Sign kiosk characteristics:

- Open roof with lattice for shading
- Organized graphics

### Picnic tables characteristics:

- Recycled plastic/wood members
- Simple form
- Accessible



### Visitor/interpretive facility characteristics:

- Low cluster of horizontal buildings
- Structure creates shading

Pueblo, Territorial, and Spanish Colonial Revival designs are now the norm in new housing, commercial, and civic projects. Chain restaurants and motels have also appropriated these styles. As we strive to define the Forest Service's identity, we must be aware of the potential to trivialize the province's distinct design. Care must be taken to incorporate elements of Southwest style without resorting to clichés or quasi-historical replicas.

**Ramada picnic structure characteristics:**

- Exposed structure, lattice for shade
- Split-face block
- Stepped walls



**Administration/interpretive facility characteristics:**

- Long, open porch
- Horizontal form





**Toilet characteristics:**

- Split-face concrete block with ribbed block details
- Native plant materials



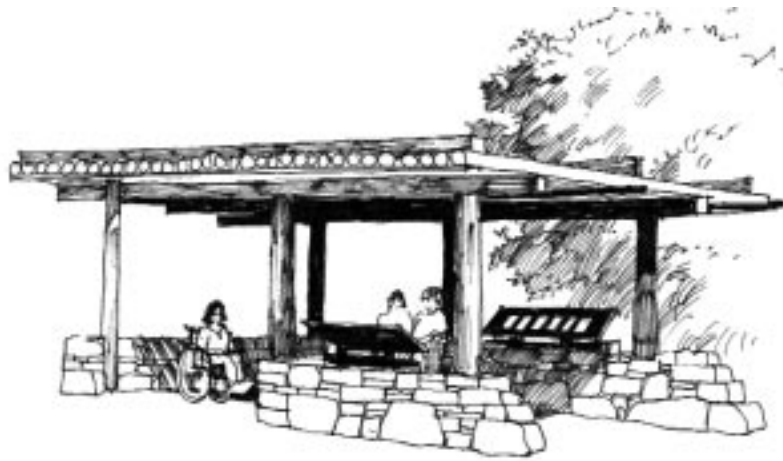
**Administration/interpretive facility characteristics:**

- Soft stucco edges
- Territorial influences
- Punched, vertical windows

**Maintenance/work facility characteristics:**

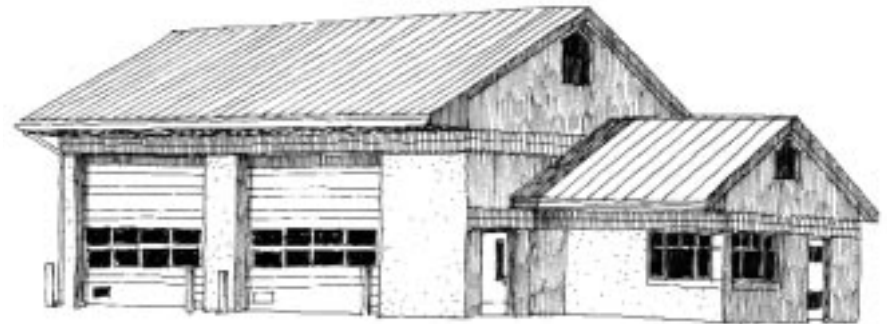
- Low, horizontal form
- Pueblo influences





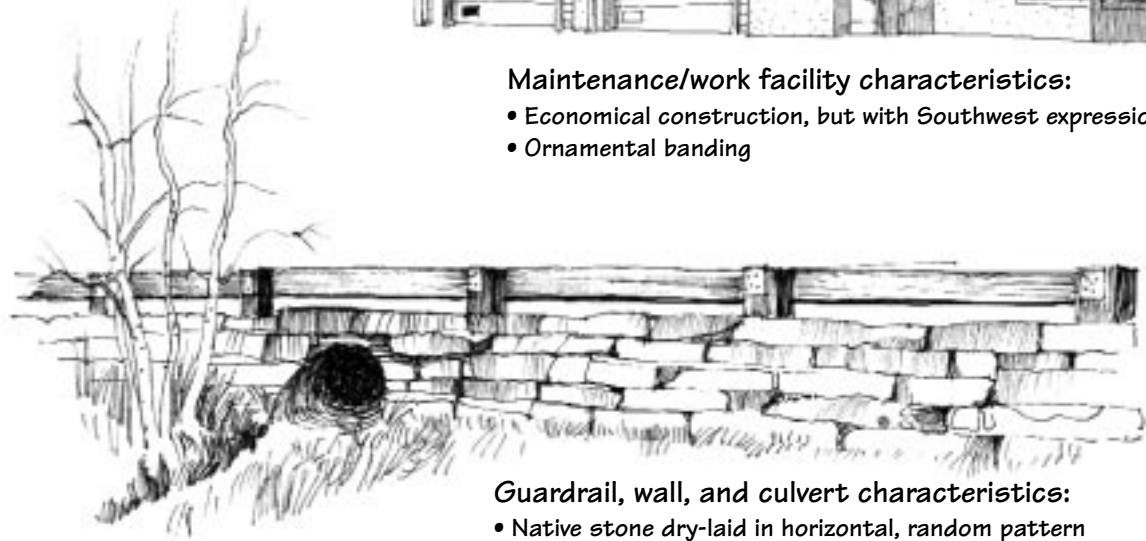
**Interpretative/shade structure characteristics:**

- Native stone matching local geology
- Indigenous influences
- Open lattice roof for shade only



**Maintenance/work facility characteristics:**

- Economical construction, but with Southwest expression
- Ornamental banding



**Guardrail, wall, and culvert characteristics:**

- Native stone dry-laid in horizontal, random pattern
- Finished culvert end