County of Yolo

PLANNING AND PUBLIC WORKS DEPARTMENT

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PLANNING COMMISSION STAFF REPORT **May 14, 2009**

FILE #2009-004: The proposed Yolo County Design Guidelines will assist in the design and review of industrial, commercial, and residential development proposals in the unincorporated area of the county. The Design Guidelines establish a set of design criteria to guide developers in addressing innovative design concepts in their development proposals, while providing staff with an additional level of review authority.	
APPLICANT: Yolo County	
LOCATION: Within the unincorporated area of the county. **SUPERVISOR DISTRICT:** All	**GENERAL PLAN:** Various **ZONING:** Various **SOILS:** Various **FLOOD ZONE**: Various
ENVIRONMENTAL DETERMINATION: "General Rule" Exemption	
REPORT PREPARED BY: Stephanie Berg, Associate Planner	**REVIEWED BY:** David Morrison, Assistant Director

RECOMMENDED ACTIONS

That the Planning Commission recommend that the Board of Supervisors:

1. **RECEIVE** a staff presentation, hold a public hearing, and accept public testimony on the proposed Yolo County Design Guidelines; and

2. **APPROVE** and **ADOPT** the Design Guidelines as a comprehensive set of design recommendations and review criteria for development proposed in the unincorporated area of the county.

REASONS FOR RECOMMENDED ACTIONS:

The Yolo County Design Guidelines will provide developers, property owners, residents, decision makers, and stakeholders with the county's expectations for the design and appearance of development proposals, as well as promote innovative and creative design solutions for industrial, commercial, and residential development proposed in the unincorporated area of the county. The Guidelines will also assist county staff in providing better review of development proposals to ensure projects have incorporated design elements that are consistent with the intent of the guiding design principles.

BACKGROUND

At the request of the Board of Supervisors, an ad hoc Planning Commission subcommittee was formed to draft a set of design review criteria for all new industrial, commercial, and residential development in the unincorporated area of the county. The subcommittee consisted of three Planning Commissioners (Leroy Bertolero, Mary Kimball, and Jeff Merwin), a local architect and ex-Planning Commissioner (Betty Woo), two staff liaisons (Jeff Anderson and Stephanie Berg), and a volunteer UCD intern (Erica Jones). One year of collaboration resulted in a draft set of Design Guidelines that came before the Planning Commission at a workshop held on January 29, 2009. Subsequently, the Guidelines were circulated for public and agency review, which has resulted in several minor text changes and/or additions, as described below under "Staff Analysis" and "Other Agency Involvement."

The project consists of a set of stand-alone Design Guidelines documents that recommend development approaches for industrial development, commercial development, and residential development within the unincorporated area of the county. The work product also includes reference appendices for landscaping guidelines and sustainability guidelines. An introductory section (Introduction), not previously reviewed, has also been prepared for the project.

With the exception of the Design Review Guidelines in the Esparto General Plan, Yolo County has no formally adopted set of design review criteria, which can often result in a lack of direction for those seeking to develop in Yolo County. The proposed Design Guidelines establish a set of criteria for the design and review of developmental projects, which is supplemental to meeting the requirements of county development standards, zoning regulations, and General Plan policies. Although not mandatory, the guidelines are meant to be adhered to by, and applied to, all new development proposals.

The Yolo County Design Guidelines offer a comprehensive set of design recommendations to encourage creative design solutions for development proposed in the industrial, commercial, and residential zoning districts in the unincorporated area of the county. The Design Guidelines will serve as a tool for communication between county staff, developers and industry, and the community at-large, to guide development towards innovative design products.

STAFF ANALYSIS

Subsequent to the January 29, 2009 Planning Commission workshop, the Yolo County Design Guidelines were circulated for public and agency review, which included the citizens advisory committees, fire districts, cities, and local developers. The Design Guidelines were also reviewed at the April 22, 2009 Development Review Committee. Where applicable, recommendations were incorporated into the project as feasible. Some comments could not be incorporated into the project, as they were more regulatory than these Design Guidelines allow. Most of the changes were text modification and did not change the intent of any specific design objective. For instance, the word "should" was used repeatedly throughout the document, which created a sense of ambiguity for many reviewers. As guidelines, they are directive rather than regulatory, so several guidelines were amended to omit "should," and they now read with more clarity. However, it should be noted that some reviewers interpreted the Guidelines as too regulatory. This interpretation is clarified in the Introduction, which emphasizes incorporation of the Guidelines as relevant to the project proposal. Specific changes and comments are outlined in the table below.

The overall purpose of the Design Guidelines is to promote good design without hindering creativity by the applicant. Once adopted, all development projects will be subject to review for their consistency, as applicable, with the Design Guidelines. This means that development proposals must incorporate design approaches that address the key design principles as specified in the Design Guidelines. These principles include: environmentally-sensitive site planning; ensuring good water

quality; high quality architecture; materials conservation; green building techniques; universal accessibility features; pedestrian friendly amenities; compact development; preservation of the county's agricultural and natural resources; and respect for the rural quality of life.

Design review will be incorporated into the normal course of project review. All development proposals will be reviewed for consistency with the Design Guidelines, much like they are currently reviewed for consistency with the General Plan and County Code. Any applicant proposing to develop in the unincorporated area of the county will be advised to incorporate design elements from the Design Guidelines into their projects, as feasible. Where certain design criteria are not feasible, applicants are encouraged to offer equivalent design solutions.

OTHER AGENCY INVOLVEMENT

The Design Guidelines were circulated for agency and public review from March 24, 2009, until April 27, 2009. Circulation included other county agencies, local developers, citizen advisory committees, local interest groups, a local landscaping company, the cities, housing agencies, and copies were posted at the county public libraries. Several responses were received and are included in the table. The Design Guidelines were also reviewed at the April 20, 2009 Development Review Committee. Comments are as follows:

Commenter/Date	Comment	Response
Ray Groom, Yolo County General Services March 25, 2009	Tighten up insulation requirements to higher than Title 24 standards. Allow for alternative cooling solutions. Pre-plumb all 2-story structures to allow for future solar applications. Require 18-inch roof overhang on new homes.	Included recommendations in the Sustainability Guidelines.
Development Review Committee April 15, 2009	Ensure use of porous materials for parking surfaces meet load capacity. Consider the industrial use and its impact to groundwater if using permeable surfaces. Certain plant species could affect septic systems.	Created new design guideline, in Industrial and Residential Guidelines, with respect to meeting load capacity: ***If pervious surfaces are used, load bearing capacity must meet the heaviest anticipated use, including emergency vehicles.*** Included additional language with respect to using pervious materials in the Industrial and Commercial Guidelines: ***Pervious materials should only be considered where unpolluted storm water is disposed. Pervious materials or ground disposal may not be suitable for industrial facilities where pollutants might impact groundwater.*** Included additional language to existing guidelines, where appropriate, with respect to landscaping areas: ***Consult with Yolo County Environmental Health if landscaping within a leach field area.***
Dunnigan Advisory Committee April 20, 2009	Confirm that the guidelines are only suggestions for new builders and individuals and will not affect Dunnigan's Specific Plan. Add the following statement to "Introduction" section paragraph No. 1: **The County Design Guidelines shall**	The Introduction section has been modified to specifically state that the Design Guidelines do not supersede any General Plan or associated community plan policies, or subsequent Specific Plan Polices, regulating land use development

Commenter/Date	Comment	Response
	not supersede Specific Plan guidelines. The Yolo County General Plan guidelines and any Specific Plan guidelines shall take precedence over the County wide Design Guidelines.	in the county.
	Recommended eliminating the design guideline **R.G.5: Gated Communities** in the Residential Design Guidelines under Section II Street System and Circulation, because gated communities afford protection and security, are desirable, and should be utilized if a developer wishes to include in a Specific Plan. Guidelines should not attempt to state what can or can't be built on private property.	Comment noted. The design guideline discouraging gated communities is consistent with policies in the 2030 Draft General Plan, as directed by the Board of Supervisors.
	The Dunnigan Advisory Committee requested additional time to provide more comments after their May 20 meeting.	Comments will be welcomed at the May 14, 2009, Planning Commission meeting and will be taken up until Board of Supervisors action.
Todd Riddiough, Yolo County Public Works April 22, 2009	Sustainability Guideline **Water Recycling** should mention Environmental Health approval of a greywater system. Residential Guideline **R.G. 36 Walkway Lighting** mentions bollards, which aren't used for lighting.	Modified the guideline to read: ***If feasible, pre-plumb for future use of a greywater system and/or install a water catchment/retention system for irrigation use. Use of a greywater system must meet with Yolo County Environmental Health standards.*** Deleted "bollards" from guideline.
Dan Boatwright, Castle Companies April 23, 2009	Extensive comments noted throughout the Design Guidelines. Most of the comments revolve around the problems of trying to build stormwater infiltration/permeable facilities, "green" building, and universal design. Requested that the Design Guidelines stress economic viability. Requested a percentage be placed on the use of native and drought tolerant plantings. Does not agree that plants not suited to their environment require more maintenance. Requested using "Build it Green" principles in Sustainability section. Has not been successful with permeable storm water facilities. Requested to replace the word "preserve" with the word "conserve" because preserve means "you can't touch it." Questioned why the Design Guidelines include accessibility and universal design features since the Board of Supervisors elected not to adopt a Resolution requiring such features. Stated that new homes are much more energy efficient – some of the Sustainability Design Guidelines penalize the new home builder.	Addressed concerns where applicable. Staff is aware that not all projects can meet all of the design criteria as suggested in the Design Guidelines. The Guidelines are advisory and projects will be reviewed for their consistency with the design criteria. Applicants will be responsible for applying the guidelines where they are feasible and documenting where they are not feasible. Landscaping guidelines include a minimum 25 percent recommendation for including native and drought tolerant plantings. Sustainability Guidelines use the LEED framework. Permeable facilities are currently successful in the City of Woodland and other jurisdictions. Will require appropriate engineering. The Design Guidelines intentionally use the word preserve to protect cultural and biological resources. The county strongly encourages including accessibility and universal design features, where feasible. Many of the Sustainability Design Guidelines are expected to become

Commenter/Date	Comment	Response
	Concerned that **C.G.30 Character Preservation** in the Commercial Design Guidelines will prevent the renovation of downtown Esparto.	standards required by the state.
	Disagrees with some of the compact development guidelines in the Residential Design Guidelines, such as narrow residential streets and use of private alleys.	Comment noted. Guideline is meant to encourage new development that enhances local character. Guidelines are recommended, where feasible.
	Some of the architectural detail guidelines in the Residential Design Guidelines are too expensive. The accessibility and universal design features limit design. ADA accessibility design is too difficult and expensive.	Guidelines are applicable, where feasible.
	Suggested eliminating **Energy Conservation Features** in the Residential Design Guidelines and, instead, focusing on upgrading existing homes.	Comment noted. Guidelines apply to all new development.
David Hunt, Fire Chief Dunnigan Fire Protection District April 27, 2009	Traffic circles (round-abouts) do not provide the traffic control that is conducive to safe pedestrian crossing.	Comment noted. Studies indicate roundabouts can be designed to provide safe pedestrian crossings. Design criteria shall not conflict with safety.
	Traffic lanes on narrow streets must be wide enough for emergency vehicles to navigate and operate. Curbside parking on narrow residential streets must be controlled and enforced, and should not extend for more than a few blocks. Requested using the National Fire Protection Association (NFPA) and Insurance Services Offices (ISO) standards.	Any residential street design must meet fire codes and Yolo County Public Works Improvement Standards, which supersede any specific design guidelines. The Design Guidelines are not meant to be in conflict with any such standards.
	Architectural features, parking lots, and landscaping need to provide easy access to fire department connections on or near structures. Requested including fire hydrant standards in Design Guidelines.	Comment noted. Placed language throughout the guidelines referencing access to fire hydrants and fire department connections. Fire hydrant standards are not included in the Design Guidelines, as they are subject to local fire district standards and are typically included in a project's Conditions of Approval.
	Industrial, commercial, and retail properties open to the public should provide "as built" copies of building floor plans, site plans, and storm drains to the local fire department before the structure is open to the public. Industrial and public accessible properties require a Knox box located near the entrance.	Comments noted. Suggestions not included in the Design Guidelines as they are typically standards placed in a project's Conditions of Approval, where necessary.
Bill Weber, Dunnigan resident and Advisory Committee member	Likes the concept of design guidelines for new development in the unincorporated area of the county.	Comment noted.
	Would like more emphasis placed on buffering the areas between industrial and residential development, such as road improvement requirements for truck access, i.e., requiring separate turn lanes, off-street loading and unloading areas, enough truck parking and turning room,	Industrial Design Guidelines address buffering between different uses, as well as access and parking design for truck maneuvering. Comment noted on sound buffering.

Commenter/Date	Comment	Response
	noise buffering designs, including setbacks of at least 100 feet, using evergreen trees and non-obtrusive sound walls.	
	Recommends less emphasis on bike and pedestrian guidelines since they are in conflict with truck traffic. Likes lighted parking with pedestrian paths, visibility from street. Recommends including encouragement for graffiti resistant design, such as shrubbery around buildings and walls, lighted signs, setbacks from streets. Recommends skateboard resistant design on loading ramps, stairs and railings.	The Industrial Guidelines recommend landscape screening for large expanses of wall, which can also deter graffiti. Comment noted on skateboard resistant design, which will be up to the individual developer.
	Is particularly complimentary of the Commercial Design Guidelines. Good mix of car, bike, pedestrian and truck traffic; good encouragement for aesthetically pleasing designs and landscaping, without being too restrictive to allow needed commercial growth.	Comment noted.

ATTACHMENTS

Attachment A Yolo County Design Guidelines

Yolo County

Design Guidelines

YOLO COUNTY DESIGN GUIDELINES

TABLE OF CONTENTS

Section 1, *Introduction*, and Section 2, *Appendices*, include general information that relates to all built projects. Separate *Design Guidelines* documents are available for Industrial, Commercial, and Residential development proposals.

SECTION **PAGE**

The following sections are available as separate documents. Applicants may obtain the document that corresponds to each particular project.

Industrial Guidelines

Applies to those areas zoned Limited Industrial (M-L), Light Industrial (M-1), and Heavy Industrial (M-2), and includes:

- Research and Testing Facilities
- Light and Heavy Manufacturing Facilities
- Agricultural Industrial Complexes
- Storage Facilities
- Automobile Service and Repair
- Corporation Yards
- Construction Shops and Yards
- Building Materials Sales
- Warehouses
- Canneries
- Trucking Terminals and Garages

Commercial Guidelines

Applies to those areas zoned Neighborhood Commercial (C-1), Community Commercial (C-2), General Commercial (C-3), and Highway Service Commercial (C-H), and includes:

- Retail/Mercantile
- Hotels
- Business, Professional, and Medical Offices
- Restaurants and Food Services
- Personal Services
- Grocery Stores
- Movie Theatres
- Big Box Retail

Residential Guidelines

Applies to new homes in areas zoned Residential Suburban (R-S), Residential One-Family (R-1), Residential One-Family or Duplex (R-2), and Multiple Family Residential (R-3)

- Single-Family Dwellings
- Duplexes
- Multiple-Family Dwellings/Apartments

1. Introduction

The Yolo County Design Guidelines expand on the policies governing development in the Yolo County General Plan and associated community plans, as well as development and zoning standards in the Yolo County Code. This document is intended to supplement the General Plan and County Code with a set of design criteria of preferred design elements for industrial, commercial, and residential development projects within the unincorporated area of the county.

a. Background

The primary industry in Yolo County is agriculture, and the county has some of the highest quality agricultural land in the nation. The county is also expected to experience a higher level of growth over the coming years. These defining characteristics provide the framework for the Design Guidelines to promote building practices that allow new industry and housing to locate in Yolo County without jeopardizing the county's existing strength as an agricultural center. These guidelines seek to improve the visual characteristics and urban design of new growth, retain water quality, focus development in the urban areas and away from prime agricultural land, ensure compatibility with adjoining land uses, and improve quality of life for existing and future residents.

b. Purpose

The overall purpose of these Design Guidelines is to establish clear and comprehensive design recommendations for new development in the unincorporated area of Yolo County, without limiting creative design solutions. The Guidelines are intended to be used by county staff during project review, as well as developers, property owners, residents, decision makers, and other stakeholders. The ultimate goal is to provide a set of criteria that outlines the county's expectations for the planning, design, and review of development proposals. The Design Guidelines are intended to promote innovative design concepts, and should not hinder creativity.

c. Design Principles

- Projects should incorporate:
  - Environmentally-sensitive site planning concepts,
  - High quality architectural design,
  - Innovative use of materials, i.e., resource conservation,
  - Sound construction methods, and
  - Green building techniques.
- The natural beauty of the county should be preserved.
- The built environment should respect and preserve the agricultural value of the land.
- The exterior of proposed developments should be compatible with and/or enhance the design scale and context of surrounding properties and buildings.

d. Applicability

The Design Guidelines apply to proposals for new development. Examples of projects subject to design review are listed in the Table of Contents. Separate Design Guidelines are available for industrial projects, commercial projects, and residential projects. Applicants are advised to obtain and read the Guidelines that

apply to each particular project. Appendices for General Landscaping Guidelines (Appendix A) and Sustainability Guidelines (Appendix B) are also available. If questions arise regarding the Design Guidelines or Appendices, a planner at the Yolo County Planning and Public Works Department should be consulted.

e. Organization and Use

Each set of Design Guidelines is broken down into subtopics to help define the guiding principles that reflect the county's desire for innovative design projects that will promote smart growth principles, economic vitality, resource conservation, and agricultural preservation. These guiding principles are supported by specific guidelines, which illustrate key design objectives. When appropriate, illustrations or photographs are provided to clarify the design guidelines. The visuals are intended to promote the design of innovative projects, but should not hinder creative efforts.

f. **Implementation**

The Design Guidelines are intended to serve as a tool to strongly encourage sustainable and economically viable design approaches for industrial, commercial, and residential development within the unincorporated area of the county. Used as a reference guide for new development, the Design Guidelines establish a set of design criteria for the review of development projects to help guide the approval process towards architecturally desirable projects. All discretionary applications will be subject to the design review process. Although not mandatory, the Design Guidelines reflect the county's vision for the preservation of its natural resources and environmentally-sensitive site planning, while representing the standard to which projects will be evaluated.

g. Definitions

i. Guideline- Refers to a design recommendation or an approach in project design that reflects the county's vision for innovative development.
ii. Impervious Surface- Any material that prevents absorption of storm water into the ground. Common examples are concrete and building roofs.
iii. Mass- The three-dimensional bulk of a structure: height, width and depth.
iv. Pervious Surface- Any material that permits full or partial absorption of storm water into the ground. Common examples are gravel and swales.
v. Scale- The spatial relationship between the mass of structures and open areas along a street or block front.

Yolo County: General Landscaping Design Guidelines

Appendix A

APPLICABILITY

These General Landscaping Design Guidelines provide general plant selection information that applies to all ornamental landscaping in Yolo County. Refer to the landscaping section in the Design Guidelines applicable to each project for site-specific information, including landscape-screening recommendations.

ORGANIZATION

The Landscaping Design Guidelines provides a synopsis of recommended plantings. The Plant Species Guide lists trees, shrubs, ground covers, vines, and ornamental grasses that are recommended for the Yolo County area based on the guidelines. The Plant Species Guide is presented in a grid format for easy reference.

GUIDELINES

RECOMMENDED PLANTS

Projects should incorporate plants that are **heat tolerant, drought tolerant, and native.** Landscaping should also offer visual interest by using plants with varying forms, textures, and colors. Yolo County is historically hot in the summer months, thus it is important that plants can tolerate temperatures above 100 degrees. It is also important that plants are drought tolerant since the region experiences low rainfall during the summer. Excessive irrigation of ornamental landscaping wastes precious water that should be conserved for crops and other important uses. Finally, it is important to plant native species so that invasive species do not take over.

Drought tolerant, native plants require less time and money to maintain the landscaping because the plants will be suited to their environment. Plants not suited to their environment often require more maintenance, in addition to the use of fertilizers, herbicides, and pesticides. Landscaping that is suited for the local environment will mutually benefit both the landowner and the surrounding area by reducing maintenance costs as well as the harmful effects of fertilizers, herbicides, and pesticides. The attached spreadsheet contains an extensive listing of heat tolerant, drought tolerant, and native plants recommended for Yolo County.

INVASIVE PLANTS: DO NOT PLANT

The following species have become invasive and are strongly discouraged.

- Acacia: *Acacia* sp.
- Bermuda grass: *Cynodon dactylan*
- Bindweed or Orchard morning glory: *Convolvulus avensis*
- Bamboo: *Sasa, Bambusa, Aruninaria* sp.
- Cheat grass: *Bromus tectorum*
- Chinese pistache: *Pistachia chinensis*
- Cotoneaster: *Cotoneaster* sp.
- German ivy (Cape ivy): *Delairia odorata,* syn. *Senecio mikanioides*
- Himalayan blackberry: *Rubus discolor*
- Japanese honeysuckle: *Lonicera japonica*

- Lombardy & Hybrid poplar: *Populus* sp.
- Medusa-head: *Taeniatherum caput-medusae*
- Pennyroyal: *Mentha pulegium*
- Pyracantha: *Pyracantha* sp.
- Pampas grass or Jubatagrass: *Cortaderia selloana or Cortaderia jubata*. Crowds out native grasses and creates a fire hazard.
- Privet: *Ligusrum* sp., incl. *L. lucidurn*
- Red brome: *Bromus madritensis* ssp. *Rubens*
- Tamarisk (Salt cedar): *Tamarix* sp., incl. *T. chinensis*
- Yellow star thistle: *Centaurea solstitialis*
- Water hyacinth: *Eichhornia crassipes*
- Iceplant: *Carpobrotus edulis*. Drought tolerant, but has invaded natural habitats, especially sand dunes.
- Fennel: *Foeniculum vulgare*. Fennel is very competitive against native species.
- English or Algerian Ivy: *Hedera helix or Hedera caneriensis*. These can smother understory vegetation, kill trees, and harbor snails and rats.
- Periwinkle: *Vinca major*. Stem fragments can re-sprout, causing them to smother native plants.
- Giant Reed or Giant Cane: *Arundo donax*. These plants grow tall and dense along waterways, causing a fire hazard and clogging the water flow.
- Green Fountain Grass: *Pennisetum setaceum*. Seeds spread aggressively and the plant grows fast. Fuels fires. NOTE: Red varieties of fountain grasses are not invasive, "*Rubrum.*"
- Bridal Broom, French Broom, Portuguese Broom, Scotch Broom, or Spanish Broom: *Retama monosperma, Genista monspessulana, Cytisus striatus, Cytisus scoparius, or Spartium junceum*. The Flowers produce thousands of seeds resulting in dense thickets that invade plant and animal habitats and cause a fire hazard.
- Scarlet Wisteria: *Sesbania punicia*. This plant is invading river and stream corridors and pushing out native plants and animals.
- Tree of Heaven: *Ailanthus altissima*. Root sprouts can emerge up to 50' feet away from the parent tree.
- Blue Gum Eucalyptus: *Eucalyptus globules*. These trees are invading native plant communities and are extremely flammable.
- Russian Olive: *Elaeagnus angustifolia*. Invades river and stream corridors, and provides a poor habitat for animals.
- Black Locust: *Robinia pseudoacacia*. Spreads easily, grows very thick and all parts of the tree are toxic to humans and animals.
- Saltcedar: *Tamarix spp*. Uses excessive water and increases soil salinity. Also a fire hazard.
- Chinese Tallow Tree: *Sapium sebiferum*. Reproduces by root and seed and crowds out native plants.
- Mayten: *Maytenus boaria*. Has been found to be quickly spreading through the valley.
- Edible Fig: *Ficus carica*. Dominates stream and riverside habitats.

RECOMMENDED LANDSCAPING RESOURCES

The user of this guide is encouraged to consult with landscape professionals and/or publications to determine appropriate locations and uses for each plant. The following

recommended plant list is not all-inclusive and other plant selections may be used with site plan approval. In addition, it is important to recognize that the growth patterns listed in this document are approximations and actual growth patterns will vary based on location and soil type, among many other factors. Please contact a landscape professional if you have specific questions about how a particular plant will fare in a specific location.

The following resources were used to write these landscape guidelines and are recommended sources for additional information:

GENERAL INFORMATION

- sacvalleycnps.org: The website for the Sacramento Chapter of the California Native Plant Society has information on why it is important to plant native plants, as well as recommended plant lists.
- arboretum.ucdavis.edu/AllStar.htm: The website for the UC Davis Arboretum publishes lists of "All Stars." "All Stars" are plants that are well suited to the central valley. Documents on this website include descriptions and photos of many of the plants.
- calflora.org: The website for Calflora has a user friendly species search that gives the user feedback on appropriate plants for various areas with plant photos.
- California Native Plants for the Garden; by Carol Bornstein, David Fross, and Bart O'Brien: This book has extensive information, descriptions, and pictures of recommended plants, as well as information on how to design and care for landscaped areas.
- The Sunset Western Garden Book; published by Sunset: This book gives details on over 8,000 plants and information on how to plant in specific climates.
- Parks & Open Space Master Plan; Yolo County, CA, January 2006: This master plan contains suggested native plant species for landscaping and restoration in Yolo County.

INVASIVE SPECIES INFORMATION

- groups.ucanr.org/OHRIC/documents/newsletter1327.htm: This website has brochures on invasive species organized by region compiled by the University of California Cooperative Extension.
- cal-ipc.org/ip/inventory/weedlist.php?region=CAFP: This website includes a spreadsheet of all California invasive species compiled by the California Invasive Plant Council.

WATER QUALITY

- groups.ucanr.org/OHRIC/Landscape_Horticulture/: Describes how fertilizer and herbicides harm water quality by the University of California Cooperative Extension.

TREES

Common Name	Botanical Name	Height at Maturity	Spread at Maturity	Growth Rate	Minimum Planter Width	Watering Requirement	Native Plant	Fall Color	Flowering	Additional Comments
Deciduous										
Aristocrat pear	*Pyrus calleryana "Aristocrat"*	25-50'	30'	Moderate	4'	M		X		
Arroyo willow	*Salix lasiolepis*						X			
Big-leaf maple	*Acer macrophylum*	18'-100'				M	X	X	X	
Box elder	*Acer negundo* ssp. *Californicum*	20'-40'					X		X	Drought tolerant.
California black walnut	*Juglans californica*						X			
California buckeye	*Aesculus californica*	15'-30'				L	X		X	
European hackberry	*Celtus australis*	40'	30-40'	Moderate	6'	M				
European hornbeam	*Carpinus betulus*	40'	40'	Rapid	6'	M		X		
Fan-Tex ash	*Fraxinus velutina 'Rio Grande'*	30-50'	30-40'	Rapid	6'	M				
Flowering plum	*Prunus cerasifera*	20'	12'	Moderate	3'	M		X		
Fremont cottonwood	*Populus fremontii*	100'					X			Riparian.
Golden rain tree	*Koelreuteria paniculata*	20-35'	10-40'	Moderate	4'	M		X		
Kentucky coffee tree	*Gymnocladus dioica*	60-100'	45-50'	Rapid	6'	M				
London plane tree	*Platanus acerifolia "Bloodgood Strain"*	60'	50'	Rapid	8'	M				
Maidenhair "autumn gold"	*Ginko b. "Autumn Gold"*	60'	45'	Slow	6'	M		X		
Maidenhair "saratoga"	*Ginko b. "Saratoga"*	60'	45'	Slow	6'	M		X		
Oregon ash	*Franxinus latifolia*	70'					X			
Pacific willow	*Salix lucida*						X			
Red willow	*Salix laevigata*						X			
Sandbar willow	*Salix exigua, S. hindsiana*						X			
Sour gum tree/tupelo	*Nyssa sylvatica*	40'	20'	Moderate	4'	M		X		
Sawleaf zelkova	*Zelkova serata*	50-90'	50-90'	Rapid	6'	M		X		
Western redbud	*Cercis occidentalis*	6'-16'				L	X		X	
Western sycamore	*Platanus racemosa*	30-110'		Rapid		M	X			5-6" long and wide leaves.
White alder	*Alnus rhombifolia*	30'-40'					X			
Ornamentals										
Chitalpa "pink dawn"	*Chitalpa tashkentensis*	20-30'	20-30-	Rapid	4'	M				
Crape myrtle	*Lagaerstromia indica or hybrids*	8'-30'	5'-25'	Moderate	3'	L				
Eastern redbud "forest pansy"	*Cercis candensia*	25-35'	25'	Moderate	3'	M		X		
English hawthorn	*Crataegus laevigate "Paul' Scarlet"*	18-25'	15-25'	Moderate	4'	M		X		
Flowering crabapple	*Malus floribunda "Prairiefire"*	20'	20'	Moderate	4'	M				
Coniferous Evergreens										
Atlantic cedar	*Cedrus atlnatica*	60'+	30'	Slow/Mod	6'	M				
Arizona cypress	*Cupressus arizonica*	40'	20'	Slow/Mod	6'					
Beefwood	*Casuarina stricta*	20-35'	20-35'	Rapid	6'					
Calabrian pine	*Pinus brutia*	30-80'	15-25'	Rapid	6'	L				
California juniper	*Juniperus californica*	10-40'	10-40'	Moderate	6'					
Canary Island pine	*Pinus canariensis*	50-80'	20-35'	Rapid	6'	L				
Coast redwood	*Sequoia semperviens "Soquel"*	70-90'		Rapid	8'	M	X		X	
Deodar cedar	*Cedrus deodara*	80'	40'	Rapid	6'	M				
Fern pine	*Podocarpus gracilor*	20'-60'								
Ghost pine	*Pinus sabiniana*	100'					X			Grey-green needles, large cones.
Incense cedar	*Calocedrus decurrens*	75-90'	10-15'	Slow/Mod	6'	L	X		X	
Japanese cryptomeria	*Cryptomerica japonica*	100'	30'	Rapid	6'					
Western red cedar	*Thuja plicata "Fastigiata"*	80-90'	20-25'	Moderate	6'					
Broadleaf Evergreens										
African sumac	*Rhus lancea*	20-30'	20-35'	Slow		L				
California laurel	*Umbellularia californica*	20-25'	20-25'	Slow		M	X		X	
Toyon	*Heteromeles arbutifolia*	8'-25'	8'-15'			M	X		X	
Oaks										
Blue oak	*Quercus douglasii*	50'-70'	40-70'	Moderate	8'		X			
Burr oak	*Quercus macrocarpa*	60-75'	60-75'	Moderate	8'					
California black oak	*Quercus keloggii*						X			
Cork oak	*Quercus suber*	40'	40'	Moderate	8'	L				
English oak	*Quercus robur*	50-60'	30'	Rapid	8'					
Holly oak	*Quercus ilex*	40-70'	40-70'	Moderate	8'	L				
Interior live oak	*Quercus wislizenii*	30-70'				L	X			Recovers quickly after fire damage.
Scarlet oak	*Quercus coccinea*	60-80'	40-60'	Moderate	8'	M		X		
Southern live oak	*Quercus virginiana*	60'	60-90'	Moderate	8'					
Valley oak	*Quercus lobata*	100'	70'	Moderate	8'	L	X		X	

SHRUBS

Common Name	Botanical Name	Height at Maturity	Spread at Maturity	Watering Requirement	Native Plant	Fruit	Flowering	Additional Comments
California buckeye	*Aesculus californica*	15'-30'		L	X		X	
California fuchsia	*Epilobium canum*	1'-3'	9'		X		X	Drought tolerant.
California grape	*Vitis californicus*				X			
Chamise	*Adenostoma fasiculatum*				X			
Elderberry	*Sambucus mexicana*	6'-20'	6'-20'		X	X	X	Riparian.
Mountain mahogany	*Cercocarpus betuloides*	15'	15'		X			
St. Catherine's lace	*Eriogonum giganteum*	5'	5'-10'	L	X		X	
Mule fat	*Baccharis viminea, B. salicifolia*				X		X	
Squaw bush	*Rhus trilobata*							
Western redbud	*Cercis occidentalis*	15'		L	X		X	
Yerba santa	*Eriodicton californicum*				X			
Toyon	*Heteromeles arbutifolia*	6'-15'	6'-15'	M	X	X	X	
Wild lilac	*Ceanothus sp.*	various	various	M	X		X	Drought tolerant.
Coyote brush	*Baccharis pilularis*	5'-8'	4'	L	X		X	Heat and drought tolerant.
California wild rose	*Rosa californica*			M	X		X	Riparian. Resistant to alkali soils.
Fuchsia-flowered gooseberry	*Ribes speciosum*	about 6'	various	M	X		X	
Western spice bush	*Caulycanthus occidentalis*			L	X		X	
Red-twid dogwood	*Cornus stolonifera*			M	X		X	
Manzanitas	*Arctostaphylos sp.*	various	various	M	X		X	
Bush poppy or island BP	*Dendromecon rigida or D.harfordii*	3'-6'		M	X		X	
Cleveland sage	*Salvia clevelandii*	4'		M	X		X	
Coffeeberry	*Rhamnus californica*	15'		M	X	X		Hedgerow plant.
Jerusalem sage	*Phlomis fruticosa*			L			X	
Japanese kerria	*Kerria japonica*			M			X	
Forsythia	*Forsythia x intermidia*			M			X	
Golden currant	*Ribes aureum*	8'-16'	6'-12'	M		X	X	
Buttonbush, button willow	*Cephalanthus occidentalis*				X		X	Summer insectary plant. Riparian.
Brown dogwood	*Cornus glabrata*				X			
California blackberry	*Rubus ursinus*	10'-20'			X	X	X	Moist areas below 5,000 feet.

GROUND COVERS AND VINES

Common Name	Botanical Name	Height at Maturity	Spread at Maturity	Watering Requirement	Native Plant	Fruit	Flowering	Light Traffic	Fall Color	Additional Comments
Creeping mahonia	*Mahonia or Berberis repens*	1'-6'	various	M	X	X	X			
Manzanitas	*Arctostaphylos sp.*	various	various	M	X		X			
Virgin's bower	*Clematis ligusticifolia*				X		X			Riparian.
Wild grape	*Vitis californica*						X			Riparian. Flowers in May and June.
Jasmine (Asian or Ivory star)	*Trachelospermum asiaticum*		20'	M			X			
Pachysandra	*Pachysandra terminalis*									
Taiwan raspberry	*Rubus pentalobus*			M		X			X	
Giant alumroot or Coral bells	*Heuchera maxima and hybrids*			M	X					
Bergenia or Winter saxifrage	*Bergenia cordifolia*			M			X			
Coast purple sage	*Salvia leucophylla*			L	X		X			
Common yarrow	*Achillea millefolium*	1'-4'		M	X		X	X		
Oregon grape	*Mahonia or Berberis Sp.*	1'-6'	various	M	X	X	X			
California pipevine	*Aristolochia californica*				X		X			Climbs by twining; no tendrils.

GRASSES & FORBS

Common Name	Botanical Name	Height at Maturity	Spread at Maturity	Watering Requirement	Native Plant	Flowering	Additional Comments
Deer grass	*Muhlenbergia rigens*	4'	4'	L	X		Riparian. Attracts lady beetles that prey on pests.
Dogbane	*Apocynum cannabinum*				X		
Great Valley phacelia	*Phacelia ciliata*				X		
Lavender	*Lavendula species*	12"-18"		L		X	
Meadowfoam	*Limnanthes douglassii*						
Monkey flower	*Mimulus* sp.				X	X	Hummingbird pollinated.
Mugwort	*Artemisia douglasiana*				X		Fragrant. Stream corridors.
Narrow-leaf milkweed	*Asclepias fascicularis*	3'			X	X	Insectary plant. Drought tolerant.
Nodding needlegrass	*Nassella cernua*				X		
Owl's clover	*Castillija exserta*				X		
Penstemon	*Penstemon s* p.						
Purple needlegrass	*Nassella pulchra*				X		
Saltgrass	*Distichlis spicata*				X		
Tarplant	*Hemizonia sp.*						
Yarrow	*Achillea millefolium*				X	X	Insectary plant. Resistant to alkali soils.
Yellowray goldfields	*Lasthenia* sp.				X		
Yolo slender wheatgrass	*Elymus trachycaulus*				X		
Giant wild rye	*Leymus condensatus*	6'-8'	4'-5'	M	X		
Lindheimer's muhly grass	*Muhlenbergia lindheimeri*	5'		L	X		
Bigelow's bear grass	*Nolina bigelovii*	6'		L		X	
New Zealand flax	*Phormium tenas*			L			
Blue grama grass	*Bouteloua gracilis*						
Berkeley sedge	*Carex tumulicola*	3'	3'	M	X		
Serpentine columbine	*Aquilegia eximia*	4'-5'		M	X	X	
Blue grama grass	*Bouteloua gracilis*						
Bent grass, spike redtop	*Agrostis exarata*				X		
Blue-eyed grass	*Sisyrinchium bellum*				X		
California barley	*Hodeum californicum*				X		
California brome	*Bromus carinatus*				X		
California buckwheat	*Erigonum californica*				X		
California oniongrass	*Melica californica*				X		
California poppy	*Eschscholzia californica*				X		
Bird's-eye gilia	*Gilia tricolor*				X		
Blue wildrye	*Elymus glaucus*				X		
Creeping wildrye	*Leymus triticoides*				X		

YOLO COUNTY: Sustainability Design Guidelines

Appendix B

APPLICABILITY

The building practices and design strategies discussed in this document should be used whenever possible. This document includes sustainable guidelines that apply to all built projects. Sustainable guidelines that are specific to, or especially important for, residential, commercial, or industrial projects will be discussed in the Sustainability section of each corresponding Design Guidelines document, and are supplemental to this document.

PURPOSE AND GOALS

Sustainable building allows Yolo County to meet its current need for housing, industry, and business without compromising the ability of future generations to meet their needs. The purpose of this section is to provide building professionals with a well-organized and easy to use document that outlines sustainability guidelines that are important to building in Yolo County. The integration of sustainable techniques is encouraged in all development projects.

ORGANIZATION

Sustainable building techniques fall into five distinct categories: site selection, resource efficiency, energy conservation, water conservation, and indoor environmental quality. These five categories, which follow from the LEED framework, serve as the organizational structure of this document.

TAX BREAKS, FUNDING AND INCENTIVES:

The importance of sustainable building has resulted in a number of financial incentives.

- For current tax rebates: contact a tax professional and ask about possible rebates per the Energy Policy Act of 2005, or visit the Energy Tax Incentives Project website at www.energytaxincentives.org.
- For federal incentives: visit the EPA's Green Building website at www.epa.gov/greenbuilding/tools/funding.htm.
- For incentives offered by the state: visit the Database of State Incentives for Renewables and Efficiency at www.dsireusa.org.

GUIDELINES

SITE SELECTION

Transportation Access: New development should be in close proximity to all forms of transportation infrastructure, including bike lanes, sidewalks and public transportation, in order to offer transportation alternatives, and reduce pollution and congestion.

Amenity Access: New development should be in close proximity to local amenities and necessities, such as shopping, schools and open space.

Balance Amenities: New development should provide amenities that serve existing and adjacent development. For example, new homes should be near existing schools and should be configured and priced to reflect the local workforce. Commercial developments should appeal to existing local residents.

Tree Conservation: Trees should be preserved whenever feasible and construction damage to their root systems should be avoided.

Brownfields Reuse and Infill: Lots that qualify as infill or brownfields are the preferred location for new development.

Regional Asset Preservation: New development should preserve existing assets, such as farmland, open space, wetlands, and habitat.

RESOURCE EFFICIENCY

Home Size: Well-designed small homes can meet the needs of various types of households while consuming less land and building materials. Future inhabitants will consume less energy as a result of heating, cooling, and lighting less space.

Wood Sources: Wood should come from rapidly renewable sources such as bamboo. Use of tropical hardwoods is strongly discouraged.

Reuse of Materials: Use of salvaged materials or materials with a significant recycled content are encouraged.

Use of OSB: Use of OSB (Oriented Strand Board) for sub floor and sheathing is encouraged as a measure to reduce the need for large diameter old growth trees.

Construction Waste: Waste from the construction site should be recycled, donated to a local charity, or diverted from the landfill whenever possible.

Concrete: Replace Portland cement in concrete with recycled flyash.

Lumber: Engineered lumber should be used in the structural frame and building envelope.

Flooring: Flooring should come from rapidly renewable sources (bamboo or cork), or from reclaimed materials such as stone, tile, or wood.

ENERGY CONSERVATION

Roofing Materials: Energy Star labeled roofing materials or a light colored, reflective coating should be used to reduce cooling loads.

Install Solar Water Heater: If feasible, a solar water heater should be installed to reduce energy consumption associated with water heating.

Pre-plumb for Solar Water Heater: Plumbing should be installed that would enable future residents to easily install a solar water heater, if one is not installed at the time of construction. All two-story structures having the appropriate orientation should be pre-plumbed to allow for future solar applications.

Install PV (photovoltaic) panels: If feasible, PV panels should be installed to reduce future energy consumption.

Install Wiring Conduit for Future PV Panels: Conduit should be installed that would enable future residents to easily install PV panels, if PV panels are not installed at the time of construction.

Building Orientation: Buildings should be oriented to face north and south, or be within 30 degrees of north/south orientation, to allow a comfortable level of heat and light into the building during the majority of the day. This reduces energy consumption due to heating, cooling, and lighting.

Window Orientation: Windows should be oriented in a way that takes advantage of prevailing breezes and allows air to circulate through the building.

Shading: Buildings, especially south and west facing windows, should be shaded from the sun to reduce summer cooling loads. Recommended shading techniques include trellises, window shades, canopies, roof overhangs, and trees. An 18-inch roof overhang would reduce solar gain through walls and windows.

Window Quality: Energy Star dual glaze windows should be used to reduce summer heat and winter cold from entering the building.

Insulation: Insulation with a high R (heat resistance) factor should be used in all buildings. Developers are encouraged to use an R-30 factor for walls and R-40 for roofs.

Windows and Doors: All windows and exterior doors should be Energy Star rated and sealed tightly.

Energy Efficiency: Energy efficient heating and cooling systems, lighting, and water heating systems should be used.

Appliances: All appliances should be Energy Star rated.

Hot Water Pipes: Hot water pipes should be insulated.

HVAC and Ducting Location: The HVAC system, including all ducting, should be located within the conditioned space.

Tankless Water Heaters: Tankless water heaters are encouraged because they use less energy and deliver hot water quickly.

WATER CONSERVATION

Plants and Landscaping: Regionally appropriate plants and landscaping techniques should be used to provide shade and provide an attractive environment without using excessive water.

Irrigation Systems: Water conserving irrigation systems should be used in all landscaped areas.

Kitchen and Bathroom Fixtures: All fixtures in the bathroom and kitchen should be high efficiency or have flow reducers installed. Only high efficiency toilets should be installed.

Appliances: Only water efficient dishwashers and clothes washers should be installed.
Water Recycling: Pre-plumbing a greywater system and/or installing a water catchment/retention system for irrigation uses is encouraged.

INDOOR ENVIRONMENTAL QUALITY

Paints and Sealants: Non-toxic building materials should be used in all construction, including low or zero VOC (volatile organic compound) paints and sealants.

Insulation Materials: Insulation made from non-toxic sources, such as soybeans, cellulose, or cotton is encouraged.

Reduce Use of Formaldehyde: All interior finishes, including subfloor, cabinets, countertops, and shelving, should be made from materials with low formaldehyde content.

Natural Lighting: Natural daylight should reach the majority of indoor space in buildings and homes.

Natural Ventilation: Natural ventilation should be available through the use of operable windows, fans, building orientation, and other techniques. The HVAC system should filter all air coming into the building from outside and vent stale indoor air outside.

Bathroom Ventilation: Energy Star exhaust systems that vent to the outside should be installed in all bathrooms.

Range Ventilation: Kitchen range hoods should vent to the outside.

Fans: Installation of attic fans, ceiling fans, whole house fans, or any combination thereof, is encouraged to reduce air conditioner usage.

ALTERNATIVE COOLING SOLUTIONS

Meet energy star minimum HVAC requirements:

- www.ice-energy.com/technology/tabid/53/Default.aspx
- www.oasysairconditioner.com/?gclid=CN_61fiEv5kCFRBbagodNmG54w
- www.uponor-usa.com/Misc/Applications/Radiant-Cooling.aspx

Yolo County

INDUSTRIAL

Design Guidelines

YOLO COUNTY: Industrial Design Guidelines

Table of Contents

I. INTRODUCTION

A. APPLICABILITY

The design guidelines in this section apply to Limited Industrial (M-L), Light Industrial (M-1), and Heavy Industrial (M-2) zone districts within Yolo County. Projects within a city should conform to city guidelines. Examples of the types of uses the guidelines are intended to apply to include but are not limited to:

- Research and Testing Facilities
- Light and Heavy Manufacturing Facilities
- Agricultural Industrial Complexes
- Storage Facilities
- Automobile Service and Repair
- Corporation Yards
- Construction Shops and Yards
- Building Materials Sales
- Warehousing
- Canneries
- Trucking Terminals and Garages

These guidelines are advisory and are intended to augment, but not conflict with, applicable zoning regulations and General Plan policies.

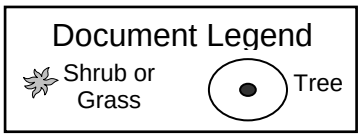
B. ORGANIZATION

This document separates industrial design into two main categories: site design and building design. Subtopics are addressed within each of these categories. Each subtopic begins with a guiding principle and is supported by design guidelines. Visuals are provided for clarification and illustration. A short section on how to incorporate industrial specific sustainable building practices is provided at the end of this document.

C. CREATIVE DESIGN

The graphics, examples, and illustrations provided in this document are conceptual and intended to inspire design professionals and promote quality design. In order to provide visually appealing industrial projects in Yolo County, alternative concepts are encouraged so long as they achieve the guiding principles contained in this document. Design elements should be compatible with surrounding development in terms of scale, mass, detailing, and building patterns.

Though these guidelines are advisory, they reflect a strong commitment by the county to create industrial projects that are attractive and people-friendly, and that add to the neighborhoods in which they locate. They are the standard to which projects will be evaluated. We recognize that for many projects not all of these guidelines can be met, whether due to parcel size or configuration, interference with the efficient use of the site for its intended purpose, cost constraints, etc. In such cases, County staff is available to discuss these constraints with project proponents as early in the design process as possible. In this way, the sprit and intent of these guidelines can be met while guaranteeing the most effective use of private and public resources during design, review and approval, construction, and subsequent operations.



II. SITE DESIGN AND RELATION TO SURROUNDING AREAS

A. GENERAL SITE DESIGN

1. ORIENTATION AND PLACEMENT OF BUILT ELEMENTS: Buildings, parking areas, and industrial accessory areas should be situated and oriented so as to provide for an efficient and functional use of land, while maintaining a relatively uncluttered environment.

I.G.1: Building Placement: Locate buildings adjacent to the sidewalk or roadway where possible, to facilitate access to the buildings and alleviate views of large expanses of paved parking areas seen from the street. (Fig. 1)

I.G.2: Adjacent Parcels: Site design should be coordinated with neighboring parcels of similar uses. This may include shared parking and circulation systems, and shared trash and recycling collection enclosures. (Figs. 1 & 2)

I.G.3: Entrances: Lot entrances should be clearly defined with the use of distinctive landscaping, signage or other prominent features. (Fig. 1)

I.G.4: Unsightly Uses: Loading and storage areas should be located on the side or rear of the site when the project abuts a public right-of-way. (Figs. 1, 7, & 8)

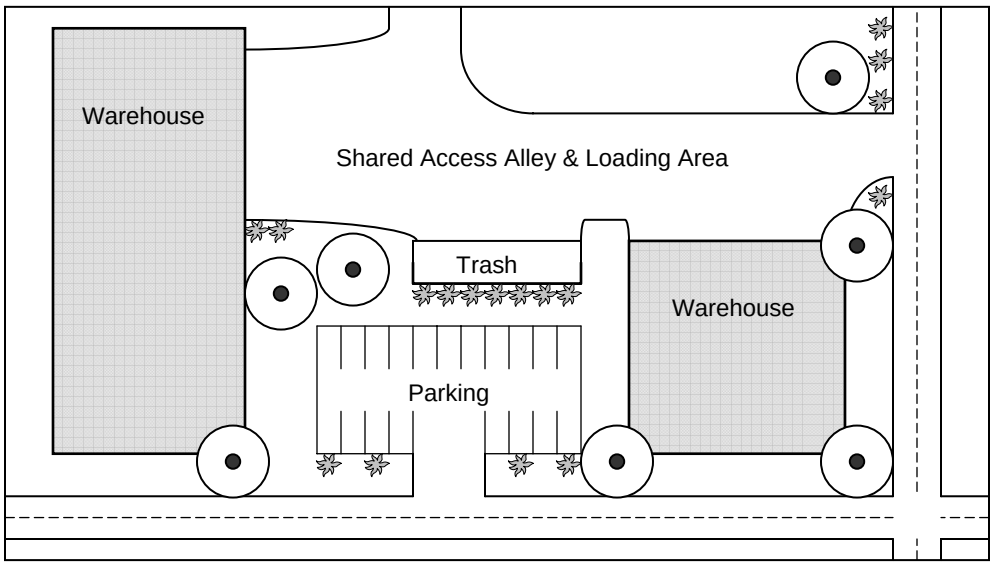


Figure 1: Loading and trash enclosures can be screened with plants and located to the rear of the property with separate alley access for trucks. Trash enclosures should be large enough to include recycling.

a. TRASH ENCLOSURES

I.G.5: Collection Areas: Outdoor storage, trash collection and loading areas should be located away from public access routes and should not interfere with circulation routes. (Figs. 1, 7, 8 & 13)

I.G.6: Recycled Materials: Trash collection enclosures should be adequately sized and concealed, and include adequate space for recycled materials containers. (Fig. 1 & 13)

I.G.7: Enclosure Access: Trash and recycling enclosures should be located in an area that is convenient for tenant and employee access. The enclosures should not block parking spaces or interfere with parking lot circulation. (Figs. 1, 7, 8 & 13)

2. PATHS OF TRAVEL AND ACCESS: Safe and efficient access and paths of travel should be provided for all forms of transportation, including pedestrians.

a. NON-MOTORIZED TRANSPORTATION

I.G.8: Transit Access: When a transit stop exists in close proximity to an industrial building or development, a safe walkway should be provided from the transit stop to the place of business. (Fig. 3)

I.G.9: Pedestrian Access: When multiple businesses are located within walking distance of each other, a safe walkway separate from vehicular traffic with clearly defined crosswalks should be provided for pedestrian access between buildings. (Fig. 3)

I.G.10: Safe Access: Walkways should be located in highly visible areas of the site to enhance safety and accessibility. (Fig. 2)

b. MOTORIZED VEHICLES

I.G.11: Non-Residential Street Access: Parking lots for industrial uses should not have access from streets primarily serving residential districts.

I.G.12: Driveway Location: Driveways should be coordinated with existing or planned median openings and located at a reasonable distance from intersections in accordance with County Improvement Standards. (Fig. 1)

I.G.13: Shared Driveway Opportunities: The number of driveways, entrances, and exits should be limited and shared with neighboring properties when possible in order to minimize interference with street traffic. (Fig. 1)

I.G.14: Separate Uses: Heavy equipment traffic should be separate from employee and customer traffic. This can be accomplished by providing separate entrances for heavy equipment and regular vehicular traffic. (Fig. 1)

Figure 2: A pathway through a large parking lot for multiple office buildings provides safe pedestrian access. Parking is shared among all the businesses.

3. PRESERVATION OF NATURAL LANDSCAPE FEATURES: Existing site amenities such as wetlands, waterways, plant and animal habitats, and culturally significant landscapes should be preserved and restored in order to maintain a healthy ecosystem.

I.G.15: Habitat Preservation: Significant areas of habitat and native vegetation should be preserved in order to maintain the local ecosystem. (Fig. 3)

I.G.16: Character Preservation: Culturally significant landscapes, such as scenic view sheds and landscapes of historical significance, should be preserved in order to maintain the local character of the area. (Fig. 3)

I.G.17: Site Amenity Preservation: Natural site amenities such as pathways, views, mature trees, riparian corridors, and parks should be preserved and/or used to enhance the design of new projects. (Fig. 3)

I.G.18: Riparian Preservation: Site design and orientation should maintain, preserve, and when possible, restore any riparian vegetation and corridor areas. Riparian corridors should be maintained as open space features in any new industrial development. (Fig. 3)

I.G.19: Access to Natural Areas: The design and orientation of parcels should encourage the use of natural areas. (Fig. 3)

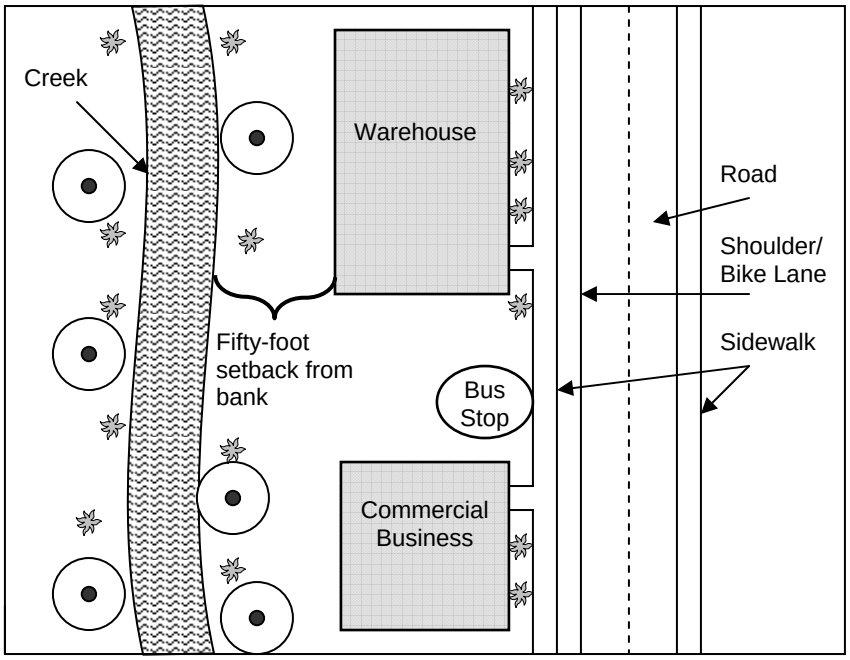


Figure 3: Buildings should be set back at least 50 feet from the bank of a waterway to preserve the riparian habitat and maintain natural features. Pathways are encouraged and should be conveniently located, with highly visible pedestrian connectivity from the site to transit facilities, natural areas, and neighboring commercial development.

B. PARKING

1. LOT ORIENTATION: Parking lots should be designed so that convenient parking and safe pedestrian and vehicular circulation is provided without excessive land consumption.

I.G.20: Vehicle Circulation: Parking lot circulation routes and parking areas should be distinct, with circulation routes having direct access to parking aisles and parking aisles having direct access to parking spaces.

I.G.21: Pedestrian Access: Parking areas should be designed in a manner that accommodates safe pedestrian access. This can be accomplished through the use of separate walkways with textured paving to clearly define crosswalk areas. (Fig. 2)

I.G.22: Shared Parking: Owners of adjoining properties should share parking facilities to reduce the amount of land consumed by parking lots. (Figs. 1, 2 & 8)

I.G.23: Hazardous Materials: Design consideration should be given to staging areas where hazardous materials can be safely loaded and unloaded. (Fig. 1 & 8)

2. PARKING SPACES: Clearly labeled and reasonably sized parking spaces should be provided for any type of vehicle that may use the lot.

I.G.24: Defined Parking: Parking areas should be clearly paint striped to show the planned circulation and parking pattern.

I.G.25: Parking Space Sizes: Parking spaces should be sized to accommodate differing automobile sizes and driver needs, where appropriate. These spaces should provide for traditional size, compact, larger work truck, and ADA access. (Fig. 4)

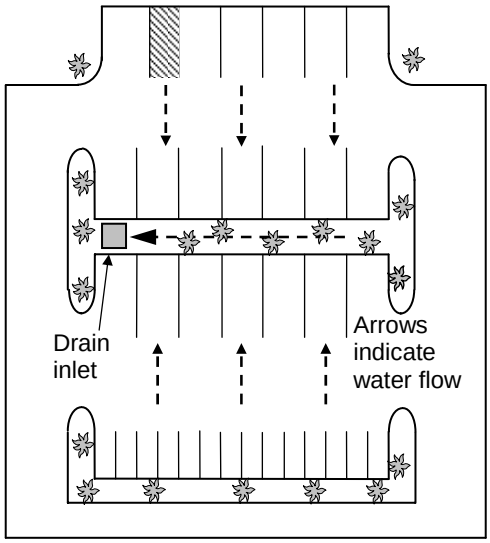


Figure 4: Accommodate various sized parking spaces, where appropriate. Storm water should drain from the parking lot to swales landscaped with native, drought tolerant plants.

3. DELIVERY AND LOADING AREAS: Adequately sized and safe delivery areas should be provided without using excessive land.

I.G.26: Truck Access: There should be adequate maneuvering space for trucks and heavy equipment. This maneuvering should not encroach on parking spaces or public right-of-way. (Figs. 1, 7 & 8)

I.G.27: Loading Areas: Loading areas should maintain clear access without interfering with pedestrian and vehicular circulation. (Figs. 1, 7 & 8)

I.G.28: Shared Loading Areas: Two or more businesses should utilize common loading areas to reduce excessive paving. (Figs. 1 & 8)

4. SHADE AND LANDSCAPING IN PARKING LOTS: "Heat island effect" should be reduced through the use of shade trees in parking lots.

I.G.29: Minimize Heat: In order to cool large expanses of paved area, parking lots should be landscaped with shade trees or other shading devices, and should incorporate the use of lighter colored paving materials.

I.G.30: Shade Trees: Parking lots should be landscaped so that within 15 years, 50% of the total parking area will be shaded. Parking lot trees should be evenly spaced and dispersed over the entire parking field, with an irrigation system that is installed and designed for efficient water usage. Each parking lot tree should have a curbed tree well of sufficient depth and overhang

distance to prevent tree damage from vehicle bumpers. See Appendix A *General Landscaping Design Guidelines and Plant Selection Grid*.

I.G.31: Landscaped Islands: Landscaped islands should be used to create separate "pods" of parking and to provide breaks in the paved area. (Figs. 2 & 4)

5. SURFACE RUNOFF: Site design should mitigate for potentially adverse environmental effects of storm water runoff by minimizing impermeable surfaces and allowing groundwater recharge where feasible.

I.G.32: Parking Lot Swales: Swales and planters should be utilized to capture storm water runoff in strategic locations of the parking lot and other paved areas for re-absorption into the ground. (Fig. 4)

I.G.33: Pervious Materials: Parking lots, walkways, and other paved areas should be constructed of pervious materials, to the maximum extent possible, that allow for storm water infiltration. (Fig. 5)

I.G.34: Roof Runoff: Roof runoff from industrial buildings should drain to a swale or be retained and used for landscape irrigation. (Fig. 4)

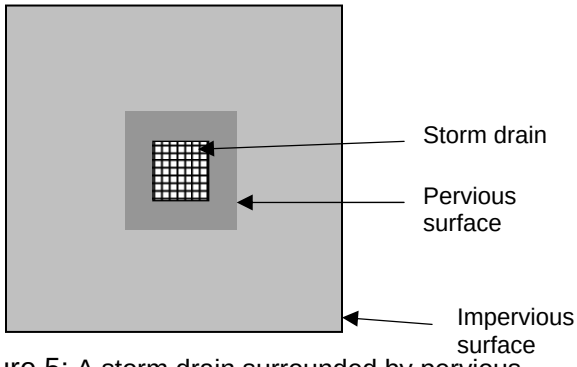


Figure 5: A storm drain surrounded by pervious surface provides an opportunity for water to reabsorb into the water table before entering the storm drain.

C. LANDSCAPING

1. SCREENING: Landscape screening should be used to hide unsightly areas without blocking the line of sight for drivers. See Appendix A for information on plant species.

I.G.35: Areas to Screen: Outdoor storage, trash collection areas, loading areas, and utility equipment should be screened and enclosed so they are out of public view. (Figs. 1 &13)

I.G.36: Plants for Screening: Landscape features such as vines or hedges should be used to hide unsightly areas. (Fig. 1)

I.G.37: Line of Sight: Screening should not be located in areas that would block the line of sight for drivers entering, leaving, or driving through the site.

I.G.38: Drive-Through Facilities: Stacking areas for vehicles in drive through facilities should be screened from public view.

I.G.39: Neighboring Residential: Windows that allow a direct line of sight into neighboring residential areas should be screened with appropriate plants or building materials to ensure the privacy of the neighboring areas. (Fig. 6)

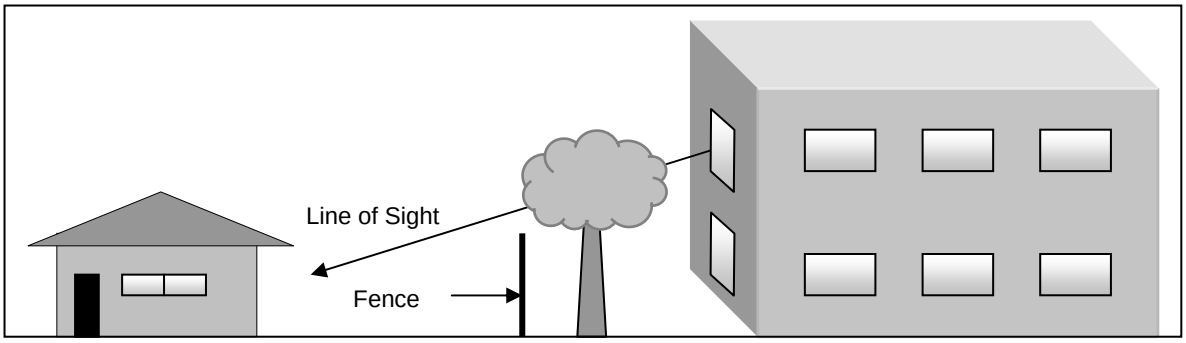


Figure 6: An evergreen tree can shield the line of sight from a second story window of an industrial building to a neighboring residence when a fence is not tall enough to provide coverage.

2. INTEGRATION WITH AND IMPROVEMENT OF THE SURROUNDING AREA: New landscaping should be designed in a way that uses water efficiently while providing aesthetic and environmental benefits.

I.G.40: Trees: Existing large trees should be retained and new drought tolerant, native trees should be planted to improve air quality, provide shade, and create buffers. See Appendix A for information on native and drought tolerant plant species. (Fig. 3)

D. BUFFERING AND INTERFACES

1. INTERFACES: Industrial sites should be located and buffered appropriately so they do not create a nuisance with neighboring sites.

I.G.41: Nuisances: Activities generating noise, traffic, dust, odor, or other nuisances should be located adjacent to similar activities. (Figs. 1 & 8)

I.G.42: Natural Buffers: Innovative uses of landscaping and berms should be used in place of sound walls, where feasible, to provide a more natural and aesthetically pleasing environment.

2. INDUSTRIAL BORDERING RESIDENTIAL: Industrial development that borders a residential district should include design elements that mitigate for any potential nuisance the industrial use may impose on the residential zone.

I.G.43: Sound Walls: A minimum six-foot masonry wall should be erected to separate industrial sites from residential uses. Long expanses of wall should be broken up with offsets and/or variations on height and should incorporate accent features such as stone or brick pilasters with caps. (Figs. 7 & 8)

I.G.44: Landscaping: In addition to the use of masonry walls, landscaping, berms, and building orientation should be utilized to buffer industrial areas from residential areas. (Fig. 7)

I.G.45: Accessory Facilities: Loading areas, driveways, trash enclosures and storage areas should be located as far as possible from existing residences. (Figs. 1, 7 & 8)

Figure 7: A masonry wall and a row of trees buffer the residential neighborhood from the industrial use. The loading docks and storage area are located away from the residential use.

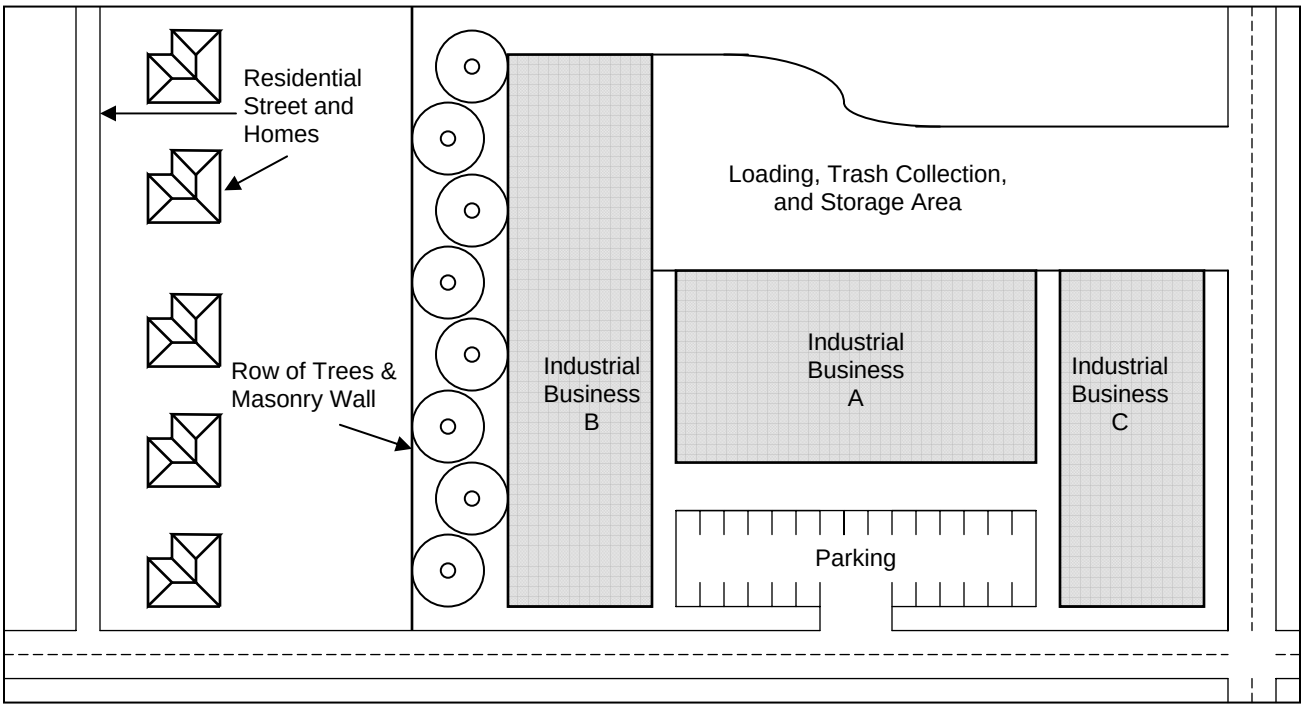


Figure 8: Loading, trash collection, and storage areas should be shared between businesses and located away from residential uses. Masonry walls, as well as a row of trees between industrial and residential areas, provide buffering opportunities.

4. INDUSTRIAL BORDERING COMMERCIAL: Fencing should buffer industrial lots from commercial lots.

I.G.46: Fencing: Fencing should be placed between industrial lots and commercial lots to buffer sound, provide privacy and security, and conceal unsightly storage areas.

E. OUTDOOR AND ACCESSORY SPACES

1. EMPLOYEES: Pleasant outdoor break areas should be provided for employees.

I.G.47: Shade: Natural tree canopies or awnings should adequately shade outdoor break areas. (Fig. 9)

I.G.48: Amenity Access: Outdoor break areas should have pedestrian access to any close amenities, such as stores, restaurants, or natural areas. (Fig. 10)

2. SAFETY: Create defensible spaces on the site for safety of pedestrians.

I.G.49: Avoid Seclusion: Avoid creating secluded areas that cannot easily be observed from the parking lot, road, or other easily accessible locations. (Fig. 10)

I.G.50: Line of Sight: Arrange buildings, plants, and design elements in a way that allows for a clear line of sight down all walkways. (Figs. 2 & 10)

Figure 9: Covered picnic tables located between buildings provide a pleasant break area for employees.

Figure 10: The same complex of buildings has a walking and bicycle path that connects to a grocery store, restaurants and a park.

F. SIGNAGE

For specific information on signage and sign regulations, please refer to the County's Sign Ordinance in the County Code (Section 8-2.2406).

1. ALLOWABLE SIGNS: Signs specifically allowed in the Limited Industrial (M-L), Light Industrial (M-1), and Heavy Industrial (M-2) zoning districts include one monument sign at each premise and one non-interior illuminated wall sign per business or tenant on each frontage or building face having a public entrance.

I.G.51: Design: Signs should relate to and compliment the overall design of the building in terms of size, shape, placement, detailing and color.

I.G.52: Placement: Signs should be placed so they emphasize design elements of a building's façade.

I.G.53: Line of Sight: Monument signs should not be placed in areas that could potentially block the line of sight for motorists entering and/or leaving the site.

I.G.54: Prohibited Signs: Refer to County Code Section 8-2.2406 for sign regulations.
Signs that are prohibited include:

- general advertising signs along freeways
- abandoned signs
- signs illuminated with neon
- signs with strobe or flashing lights
- signs that move or make noise
- roof signs
- signs that may mislead or confuse pedestrian or vehicular traffic
- signs on a natural feature such as a rock or tree
- portable signs

G. LIGHTING

1. ORIENTATION AND BRIGHTNESS: Areas should be well lit without creating excessive illumination on neighboring lots, adjacent public right-of-way, or the night sky.

I.G.55: Safety: Lighting should be provided in all public spaces, including parking areas, entries and walkways. This lighting should enhance safety of movement for cars and pedestrians.

I.G.56: Color Rendition: Lighting type should allow good color rendition for adequate visual recognition.

I.G.57: Light Pollution: All building and site lighting should be hooded, equipped with appropriate shields, and directed to the intended area of illumination to minimize off-site light spillage onto adjacent public roadways, neighboring parcels, and the night sky.

I.G.58: Placement: Outdoor light fixtures should be low intensity and placed as low as possible to provide adequate light and coverage, but never higher than twenty-five feet (25').

III. BUILDING DESIGN

A. BUILDING MASS AND SCALE

1. MASS: Building height, width and depth create visual building mass. Building mass should be designed to visually blend with surrounding buildings.

I.G.59: Visual Reduction of Mass: Building mass should be managed using one or more methods, including landscape features that soften edges or create interesting lines; recessing a second floor over the first floor; using horizontal or vertical offsets in wall surfaces; varying facades on long expanses of building; strategic placement of large potted plants; and/or articulating design details around doors and windows. (Figs. 11 & 12)

I.G.60: Rooftop Equipment: Rooftop equipment should be concealed through the use of parapets or other means. (Fig. 12)

2. SCALE: The proportion of a new building's features should be relative to the surrounding buildings' features to create balance.

I.G.61: Size: The size of new buildings should not abruptly differ from existing adjacent buildings.

I.G.62: Landscaping: Use of trees is encouraged to soften size differences between buildings.

I.G.63: Facades: Building facades should be articulated and varied to reduce the scale and uniformity of large industrial buildings. (Figs. 11 & 12)

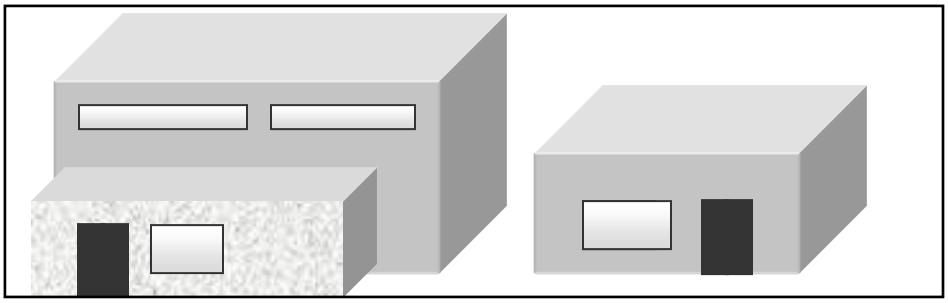


Figure 11: Varying the façade visually reduces the appearance of the new, larger building's size.

B. ARCHITECTURAL FEATURES

1. BUILDING DESIGN, MATERIALS, AND FINISHES: The design, materials and finishes of the building's façade, entryway and roofline should provide character to the building and surrounding area and maintain a durable appearance.

I.G.64: Character: Architectural features such as overhangs, projections, reveals and covered pedestrian walkways are encouraged to add character and provide shading. (Figs. 9 & 12)

I.G.65: Rooflines: Variations in rooflines should be used to provide visual relief to large industrial buildings. Roof designs should be integral with the architectural design of the development and not detract from that design. Roof elements such as parapet caps, projecting cornices, and corner details can be used to define a roof. (Fig. 12)

I.G.66: Materials: Exterior materials should include masonry, plaster, stucco, textured block, metal and brick. Metal should only be used as an exterior material when it fits in with the surrounding buildings and where other metal buildings previously exist. (Fig. 12)

I.G.67: Colors: Large areas of bright, intense colors are discouraged. Brighter accent colors should be used for trim, windows, doors, and key architectural elements.

I.G.68: Logos: Colors or logos identified with an individual company should not be incorporated as a primary architectural feature, but may be used as an accent feature to enhance the overall architectural theme.

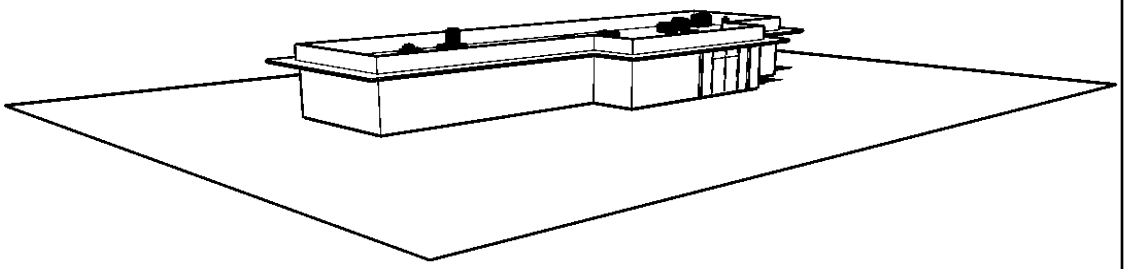


Figure 13: This building emphasizes use of architectural features such as an articulated façade, prominent front doors, hidden roof equipment, and an overhang that runs the perimeter of the building.

2. CONSISTENCY OF DESIGN: Building forms should respond to the natural environment or other existing developments so they enhance and enliven the surroundings.

I.G.69: Outbuildings: Outbuildings, such as trash enclosures and storage areas, should be architecturally compatible with the primary building (same type of materials and colors). (Fig. 14)

I.G.70: Service Station Islands: Service station islands should be architecturally integrated so that design character is compatible with the main building.

Figure 13: This trash collection and recycling enclosure uses similar building materials and colors to blend in with the primary buildings.

IV. SUSTAINABILITY

Buildings should be designed in ways that promote energy efficiency and conservation of resources. Appendix B *Sustainability Design Guidelines* has information on sustainability and green building practices that relate to all built projects. In addition to the general measures listed in Appendix B, Industrial buildings should:

- Be designed in a way that utilizes passive solar heating and cooling in order to reduce energy cost and consumption. This is especially important for industrial buildings due to their size.

- Possess a light colored roof to reflect a large percentage of solar radiation in order to reduce HVAC loads and energy consumption.

- Use ceiling mounted fans to reduce heat stratification and provide air movement.

- Use low-flow plumbing fixtures, energy efficient fixtures, systems and appliances, wherever feasible.

- Utilize natural sunlight through skylights and energy efficient light fixtures to reduce energy consumption due to lighting.

Yolo County

COMMERCIAL

Design Guidelines

YOLO COUNTY: Commercial Design Guidelines

Table of Contents

I. INTRODUCTION

A. APPLICABILITY

The design guidelines in this section apply to uses allowed in the Neighborhood Commercial (C-1), Community Commercial (C-2), General Commercial (C-3), and Highway Service Commercial (C-H) zone districts. Examples of the types of uses the guidelines are intended to apply to include, but are not limited to:

- Retail/Mercantile
- Hotels
- Business, Professional, and Medical Offices
- Restaurants and Food Services
- Personal Services
- Grocery Stores
- Movie Theatres
- Big Box Retail

These guidelines are advisory and are intended to augment, but not conflict with, applicable zoning regulations and General Plan policies.

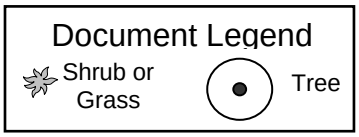
B. ORGANIZATION

This document separates commercial design into two main categories: site design and building design. Subtopics are addressed within each of these categories. Each subtopic begins with a guiding principle and is supported by design guidelines. Visuals are provided for clarification and illustration. A short section on how to incorporate commercial specific sustainable building practices is provided at the end of this document.

C. CREATIVE DESIGN

The graphics, examples, and illustrations provided in this document are conceptual and intended to inspire design professionals and promote quality design. In order to provide visually appealing commercial projects in Yolo County, which allow for a variety of uses and create economic vitality, innovative design concepts are encouraged. Design elements should compliment and enhance surrounding development in terms of scale, mass, detailing, and building patterns. New development should respond to the traditional development and architectural patterns of the region.

Though these guidelines are advisory, they reflect a strong commitment by the county to create commercial projects that are attractive and people-friendly, and that add to the communities in which they locate. They are the standard to which projects will be evaluated. We recognize that for many projects not all of these guidelines can be met, whether due to parcel size or configuration, interference with the efficient use of the site for its intended purpose, cost constraints, etc. In such cases, County staff is available to discuss these constraints with project proponents as early in the design process as possible. In this way, the sprit and intent of these guidelines can be met while guaranteeing the most effective use of private and public resources during design, review and approval, construction, and subsequent operations.



II. SITE DESIGN AND RELATION TO SURROUNDING AREAS

A. GENERAL SITE DESIGN

1. ORIENTATION AND PLACEMENT OF BUILT ELEMENTS: Buildings, parking areas, and commercial accessory areas should be situated and oriented so as to provide for connectivity, a pleasant pedestrian environment, and a functional use of land that promotes economic vitality.

a. COORDINATION AND ACCESS

C.G.1: Coordination with Neighbors: Site design should be coordinated with neighboring parcels to increase the overall connectivity of the area. This includes shared parking and circulation systems; shared bicycle, pedestrian and vehicle access points; and shared trash collection, recycling, and delivery areas. (Figs. 3 & 5)

C.G.2: Pedestrian Access: Shopping center design should encourage walking by providing pedestrian access points that do not exist for cars. (Figs. 1 & 4)

C.G.3: On-Site Access: New buildings should be oriented in a manner that promote pedestrian access between neighboring businesses and retain attractive grounds and/or outdoor spaces. (Figs. 4 & 5)

b. BUILDING PLACEMENT

C.G.4: Building Placement: Buildings should align to the public right-of-way to provide a storefront character to the street. Primary entrances should face the street, with clearly defined pedestrian zones that will enhance the vibrancy of the commercial area, facilitate access to other buildings, slow traffic down, and alleviate views of large expanses of paved parking areas. (Figs. 1 & 5).

C.G.5: Passive Solar: Buildings should be oriented in a manner that utilizes passive solar energy to reduce heating and cooling loads.

C.G.6: Unsightly Uses: Loading and storage areas should be located on the side or rear of the site when the project abuts a public right-of-way. (Figs. 5, 12 & 14)

C.G.7: Drive-Through Facilities: If feasible, drive-through facilities should not face a public right-of-way.

Figure 1: This building fronts the public right-of-way and places parking behind the building.

Figure 2: A wide buffer which includes a berm, bike/walk pathway, and landscaping can be used to conceal parking areas that abut a public right-of-way.

c. PARKING AREAS

C.G.8: Parking Entrances: Parking lot location should be clearly indicated to motorists with clearly defined entrances through the use of distinctive landscaping, signage or other prominent features.

C.G.9: Parking Lots: Parking lots should be screened from view of the public right-of-way and oriented to the rear or center of the development. (Figs. 1, 3 & 5)

C.G.10: Parking Buffers: Where parking abuts a public right-of-way there should be a visual buffer that includes features such as sidewalks, bicycle lanes, landscaping, and/or berms. Landscape screening for surface parking areas is strongly recommended. (Fig. 2)

d. TRASH ENCLOSURES

C.G.11: Collection Areas: Outdoor storage, trash collection and loading areas should be located away from public access areas without interference of circulation routes. (Figs. 5 & 14)

C.G.12: Recycled Materials: Trash collection enclosures should include adequate space for recycled materials containers. (Figs. 5 & 25)

C.G.13: Enclosure Access: Trash and recycling enclosures should be adequately sized and concealed, and located in an area that is convenient for tenant and employee access. The enclosures should not block parking spaces or interfere with parking lot circulation. (Figs. 5, 14 & 25)

Figure 3: This parking lot is located behind the shopping center in Figure 4. The pedestrian crossing pavement is lighter and of a different texture than the asphalt.

Figure 4: The pathway leading from this shopping center extends to a heavily trafficked street with additional commercial businesses. The path makes it easier for shoppers to walk to nearby businesses. The pathway is made of pervious material, allowing water to reabsorb into the water table.

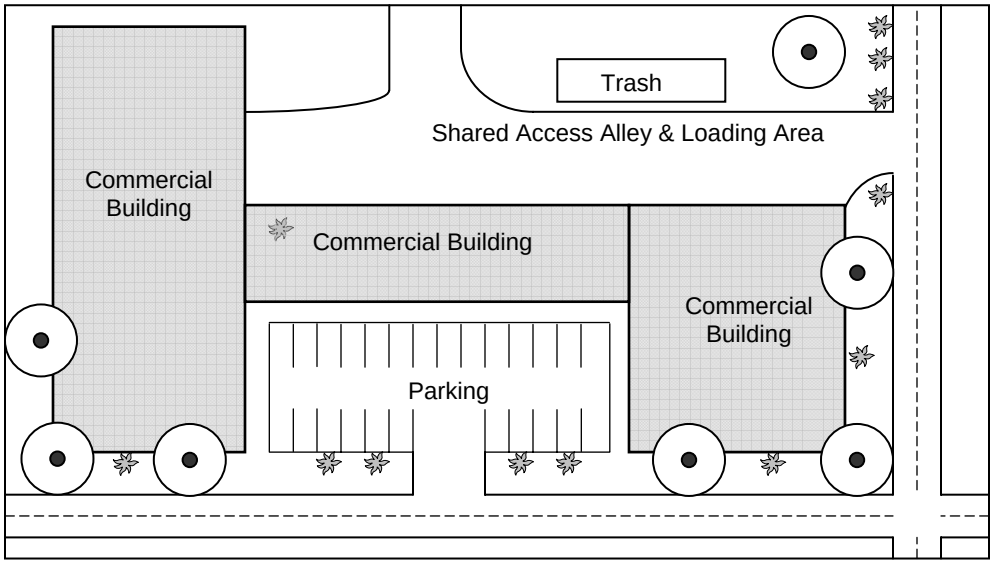


Figure 5: Loading and trash enclosures can be screened with plants and located to the rear of the property with separate alley access for trucks. Trash enclosures should be large enough to include recycling materials.

2. EXTERIOR SCALE: Exterior areas should be scaled in such a way as to invite pedestrian traffic.

C.G.14: Vibrant Outdoor Areas: Outdoor features such as plazas, courtyards, fountains, outdoor vendors, public art displays, and restaurants with outdoor seating are encouraged in order to draw people to the area. (Figs. 6, 7, 8, & 9)

C.G.15: Gathering Places: Use of street furniture and pedestrian scaled building elements are encouraged to provide informal gathering places for socializing, resting, and enjoying the community's commercial areas. (Figs. 7, 8, 9 & 10)

C.G.16: Windows: Stores should have large windows that allow a full view into the store to provide a more open and inviting feel. Windows should cover 40-75% of the wall fronting the predominant public view. (Fig. 10)

C.G.17: Central Areas: Large shopping areas or complexes should be designed to draw pedestrians to the center by using design elements such as large pathways or courtyards leading to the center, with view corridors allowing people to see inner shops. (Fig. 6)

Figure 6: The fountain at the end of the corridor makes it inviting for people to enter the area.

Figure 7: This fountain and seating area create an inviting feel. The shade structure, vines, and umbrellas provide protection from sun and rain.

Figure 8: Street furniture in this plaza provides a place for people to eat or relax.

Figure 9: The water feature and outdoor seating area provide a comfortable place for shoppers to relax and a space for casual social interaction.

Figure 10: Large windows on this storefront provide an open and inviting feel. Pedestrian scaled design elements, such as planters and canopies, make the building pedestrian friendly.

3. PATHS OF TRAVEL AND ACCESS: Safe, efficient and inviting paths of travel and access should be provided for all forms of transportation, including pedestrians.

a. NON-MOTORIZED TRANSPORTATION

C.G.18: Pedestrian Pathways: Commercial buildings should be clustered along pedestrian paths to encourage foot traffic between businesses. The pedestrian paths should be safe and inviting with clearly defined crosswalks. (Figs. 4, 6 & 10)

C.G.19: Pathway Width: Pathways should be a minimum of 5 feet wide with additional landscaped space on one or more sides to allow for easy passage. (Figs. 1, 2 & 4)

C.G.20: Visibility: Pathways should be located in highly visible areas of the site to enhance safety and accessibility. (Figs. 3 & 4)

C.G.21: Paving Treatments: Sidewalks with special paving treatments such as pavers or stamped, colored concrete are encouraged to invite pedestrian activity. (Figs. 3 & 11)

C.G.22: Transit Access: When a transit stop exists in close proximity to a new commercial building or development, a safe walkway should be provided from the transit stop to the place of business. (Fig. 11)

C.G.23: Vehicle to Building Access: Pedestrians should be able to walk a direct route from their vehicle to a commercial establishment without traversing the parking lot. (Fig. 5)

C.G.24: ADA Access: The primary building entrance for ADA access should be located within proximity to ADA accessible parking and the sidewalk.

Figure 11: This pedestrian pathway is wide and located in a highly visible area for safety. The pathway uses different paving colors and textures. A bus stop is conveniently located on the street near this safe pedestrian crossing.

b. MOTORIZED VEHICLES

C.G.25: Driveway Location: Driveways should be coordinated with existing or planned median openings and located at a reasonable distance from intersections in accordance with County Improvement Standards. (Fig. 5)

C.G.26: Shared Driveways: The number of driveways, entrances, and exits should be limited and shared with neighboring properties when possible. (Fig. 5)

4. COMPATIBILITY WITH RESIDENTIAL ZONES: Commercial areas that border residential areas should include design elements that mitigate for any potential nuisance the commercial area may impose on the residential area.

C.G.27: Buffers: Landscaping, berms, and building orientation should be utilized to buffer commercial areas from residential areas. (Figs. 12, 13 & 14)

C.G.28: Collection Areas: Loading areas, driveways, trash enclosures and storage areas should be located as far as possible from existing residences. (Figs. 12 & 14)

Figure 12: A masonry wall and a row of trees buffer the residential neighborhood from the large commercial building. The loading docks and storage area are located away from the residential use.

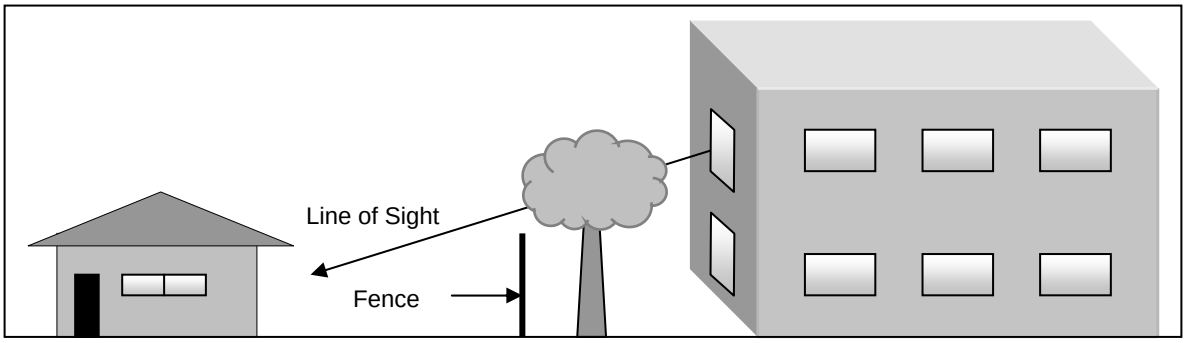


Figure 13: An evergreen tree can shield the line of sight from a second story window of a commercial building to a neighboring residence when a fence is not tall enough to provide coverage.

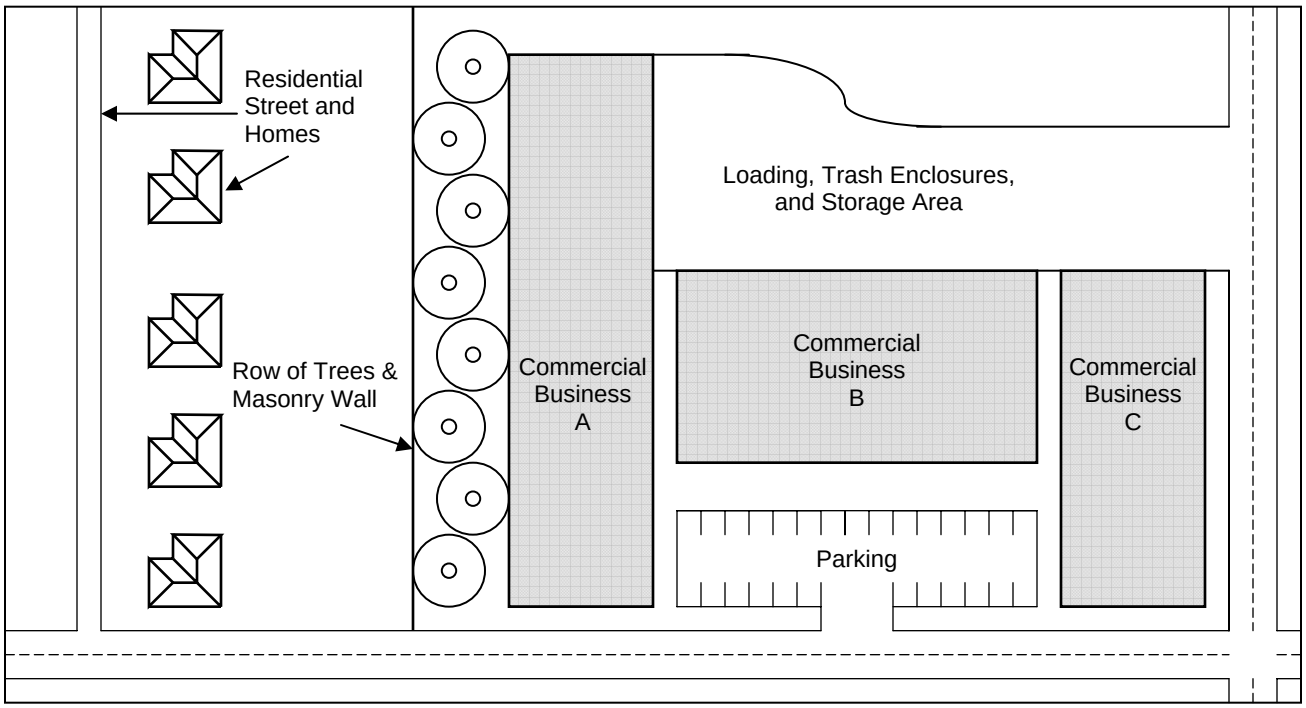


Figure 14: Loading, trash enclosures, and storage areas should be shared between businesses and located away from residential areas. Masonry walls, as well as a row of trees between commercial and residential areas, provide buffering opportunities.

5. PRESERVATION OF NATURAL LANDSCAPE FEATURES: Existing site amenities such as wetlands, waterways, plant and animal habitats, and culturally significant landscapes should be preserved and restored in order to maintain a healthy ecosystem.

C.G.29: Habitat Preservation: Significant areas of habitat and native vegetation should be preserved in order to maintain the local ecosystem. (Fig. 15)

C.G.30: Character Preservation: Culturally significant landscapes, such as scenic view sheds and landscapes of historical significance should be preserved in order to maintain the local character of the area. (Fig. 15)

C.G.31: Site Amenity Preservation: Natural site amenities such as pathways, views, mature trees, riparian corridors, and parks should be used to enhance the design of new projects. (Fig. 15)

C.G.32: Riparian Preservation: Site design and orientation should maintain, preserve, and when possible, restore any riparian vegetation and corridor areas. Riparian corridors should be maintained as open space features in any new commercial development. (Fig. 15)

C.G.33: Access to Natural Areas: The design and orientation of parcels should encourage the use of natural areas. (Fig. 15)

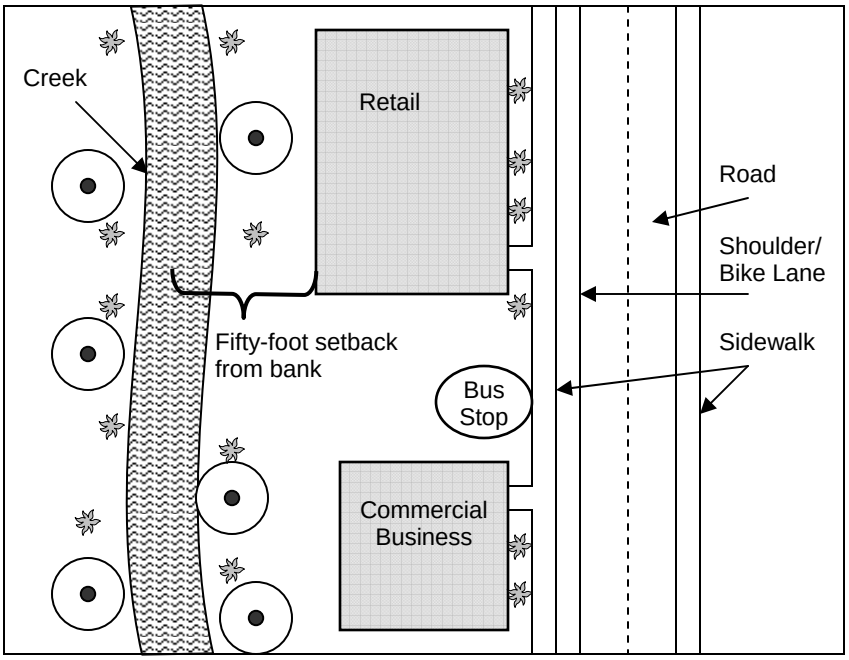


Figure 15: Buildings should be set back at least fifty feet from the bank of a waterway to preserve the riparian habitat and maintain natural features. Pathways are encouraged and should be conveniently located, with highly visible pedestrian connectivity from the site to transit facilities, natural areas, and neighboring commercial areas.

B. PARKING

1. LOT ORIENTATION: Parking lots should be designed so that convenient parking and safe pedestrian and vehicular circulation is provided without excessive land consumption. Pedestrians should be able to move safely from their vehicles to the building.

C.G.34: Location: Off-street parking should be located behind frontage buildings whenever possible. (Fig. 3)

C.G.35: Lot Sharing: Owners of adjoining properties should share parking facilities to reduce the amount of land consumed by parking lots. (Figs. 3, 5 & 14)

C.G.36: Traffic Dispersal: Parking lots should have more than one entrance and be designed in a manner that disperses automotive traffic throughout the site.

C.G.37: Circulation: Parking lot circulation routes and parking areas should be distinct, with circulation routes having direct access to parking aisles and parking aisles having direct access to parking spaces. (Fig. 3)

C.G.38: Pedestrian Access: Parking areas should be designed in a manner that accommodates safe pedestrian access between buildings, between public right-of-ways and building entrances, and between parking lots and building entrances. Pedestrian pathways can be defined by use of distinctive paving colors or patterns, or textured paving that is different from vehicle drive aisles. (Figs. 3 & 11)

C.G.39: Visual Obstructions: Large objects, such as drive up ATM buildings and wide pillars or trellises, should be strategically placed so they do not impair the driver's line of sight within a parking lot or at connections to the street.

C.G.40: Driveway Landscaping: Parking lot entrances/exits should have low landscaping on both sides to provide a clear line of sight. (Fig. 16)

Figure 16: This parking lot entrance has low landscaping on both sides in order to maintain a clear line of sight. The sign is set back so that it does not obstruct visibility.

2. PARKING SPACES: Clearly labeled and reasonably sized parking spaces should be provided for the types of vehicles that may use the lot.

C.G.41: Defined Parking: Parking areas should be clearly paint striped to show the planned circulation and parking pattern.

C.G.42: Parking Space Sizes: Three different sized spaces should be provided to accommodate a variety of automobile sizes and driver needs. These spaces should provide for compact, traditional size, and ADA access. (Fig. 17)

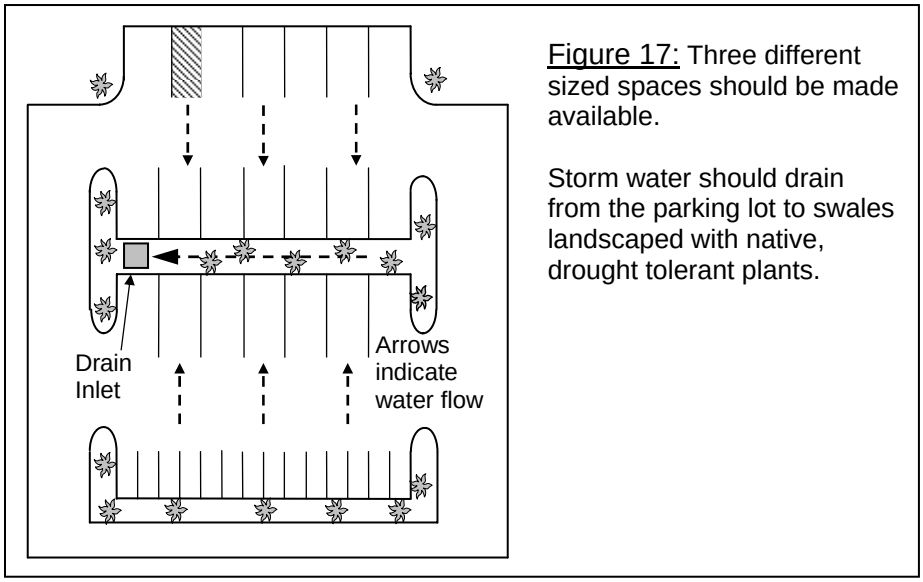


Figure 17: Three different sized spaces should be made available.

Storm water should drain from the parking lot to swales landscaped with native, drought tolerant plants.

3. DELIVERY AND LOADING AREAS: Adequately sized and safe delivery areas should be provided without using excessive land.

C.G.43: Truck Maneuvering: There should be adequate maneuvering space for delivery trucks. Deliveries should not encroach on parking spaces or any public right-of-way. (Figs. 5, 12 & 14)

C.G.44: Loading Areas: Loading areas should maintain clear access without interfering with pedestrian and vehicular circulation. (Figs. 5, 12 & 14)

C.G.45: Shared Loading Areas: Two or more businesses should utilize common loading areas to reduce excessive paving. (Figs. 5 & 14)

4. SHADE AND LANDSCAPING IN PARKING LOTS: Shade trees and attractive landscaping should be used in parking lots for the dual purpose of reducing “heat island effect” and providing a visually appealing and pleasant environment.

C.G.46: Minimize Heat: In order to cool large expanses of paved area, parking lots should be landscaped with shade trees or other shading devices, and should incorporate the use of lighter colored paving materials.

C.G.47: Shade Trees: Parking lots should be landscaped so that within 15 years, 50% of the total parking area will be shaded. Parking lot trees should be evenly spaced and dispersed over the entire parking field, with an irrigation system that is installed and designed for efficient water usage. Each parking lot tree should have a curbed tree well of sufficient depth and overhang distance to prevent tree damage from vehicle bumpers. See Appendix A *General Landscaping Design Guidelines and Plant Selection Grid* for information regarding plant species.

C.G.48: Landscaped Islands: Landscaped islands should create separate "pods" of parking that provide breaks in the paved area. (Fig. 17)

5. SURFACE RUNOFF: Site design should mitigate for potentially adverse environmental effects of storm water runoff by minimizing impermeable surfaces and allowing groundwater recharge where feasible.

C.G.49: Parking Lot Swales: Swales and planters should be utilized to capture storm water runoff in strategic locations of the parking lot and other paved areas for re-absorption into the ground. (Fig. 17)

C.G.50: Pervious Materials: Parking lots, walkways, and other paved areas should be constructed of pervious materials, to the maximum extent possible, that allow for storm water infiltration. (Figs. 4, 8 & 18)

C.G.51: Roof Runoff: Roof runoff from buildings should drain to a swale or be retained and used for landscape irrigation, where feasible.

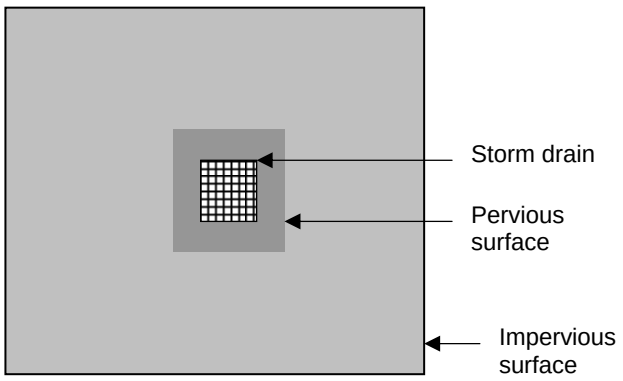


Figure 18: A storm drain surrounded by pervious surface provides an opportunity for water to reabsorb into the water table before entering the storm drain.

C. LANDSCAPING

1. SCREENING: Landscape screening should be used to hide unsightly areas without blocking the line of sight for drivers. See Appendix A for information regarding plant species.

C.G.52: Areas to Screen: Outdoor storage, trash collection areas, and delivery areas should be screened and enclosed so they are out of public view. (Fig. 25)

C.G.53: Plants for Screening: Landscape features such as vines or hedges should be used to hide unsightly areas.

C.G.54: Line of Sight: Screening should not be located in areas that would block the line of sight for drivers entering, leaving, or driving through the site.

C.G.55: Neighboring Residential Screening: Windows that allow a direct line of sight into neighboring residential areas should be screened with appropriate plants or building materials to ensure the privacy of the neighboring areas. (Figs. 12, 13 & 14)

C.G.56: Drive-Through Facilities: Stacking areas for vehicles in drive-through facilities should be screened from public view.

2. INTEGRATION WITH AND IMPROVEMENT OF THE SURROUNDING AREA: New landscaping should be designed in a way that uses water efficiently while providing aesthetic and environmental benefits.

C.G.57: Trees: Existing large trees should be retained and new drought tolerant, native trees should be planted to improve air quality, provide shade, and create buffers. See Appendix A for information regarding native and drought tolerant plant species. (Fig. 15)

C.G.58: Tree Grates: Trees that are planted within pedestrian areas should have replaceable grates around the base of the tree to provide a walking surface and room for the tree to grow. (Fig. 19)

Figure 19: The grate at the base of this tree provides a walking surface, allows water to absorb into the roots, and can be replaced if the trunk of the tree becomes too large.

D. OUTDOOR AND ACCESSORY SPACES

1. SHOPPERS, PEDESTRIANS AND EMPLOYEES: Pleasant outdoor areas should be provided for shoppers, pedestrians and employees through the integration of creative design elements.

C.G.59: Shade: Natural tree canopies or awnings should adequately cover outdoor seating areas and walkways to protect people from sun and rain. (Figs. 7 & 21)

C.G.60: Vibrant Outdoor Areas: Vibrant and welcoming outdoor areas should feature art, street furniture, and landscaping that compliment a building's setting. These elements should be placed along the sidewalk to provide a place for casual social interaction. (Figs. 7, 8, 9 & 20)

C.G.61: Seating: Multiple seating opportunities should be provided throughout commercial areas and shopping centers. (Figs. 7, 8, 9, 20 & 21)

C.G.62: Outdoor Eating Areas: Attractive and inviting outdoor eating areas should be located near restaurants and coffee shops. (Figs. 8, 9, 20 & 21)

C.G.63: Amenity Access: Outdoor areas such as plazas and courtyards should be adjacent to sidewalks that lead to other close amenities, such as stores, restaurants, or natural areas to promote pedestrian activity. (Fig. 4)

Figure 20: Different seating options are available in this commercial area with tables located near an ice cream store, a bench for shoppers to relax, and a platform around the clock. The design features are pedestrian scaled and welcoming.

2. SAFETY: Create defensible spaces on the site for safety of pedestrians.

C.G.64: Avoid Seclusion: Avoid creating secluded areas that cannot easily be observed from the parking lot, road, or other accessible locations.

C.G.65: Line of Sight: Arrange buildings, plants, and design elements in a way that allows for a clear line of sight down all walkways. (Figs. 7, 8, 11 & 21)

C.G.66: ATM Visibility: ATMs should be located in highly visible and well-lit locations.

Figure 21: The vines covering this walkway protect customers from sun and rain, but the area is still highly visible to the street and the parking lot for safety. Outdoor seating is available adjacent to the lawn.

E. SIGNAGE

For specific information on signage and sign regulations, please refer to the County's Sign Ordinance in the County Code.

1. AESTHETIC CHARACTER OF COMMERCIAL SIGNS: Attractive signage should be used to enhance architectural design and entice visitors to a commercial center.

C.G.67: Placement: Signs should be placed so they emphasize design elements of a building's façade.

C.G.68: Design: Signs should compliment the building style, convey the character of the business, and be easy to read.

C.G.69: Walkway Clearance: Signs that extend over walkways should maintain an 8' clearance.

C.G.70: Window Coverage: Window signs should cover no more than 10% of the window space.

C.G.71: Prohibited Signs: Refer to County Code Section 8-2.2406 for sign regulations.
Signs that are prohibited include:

- general advertising signs along freeways
- abandoned signs
- signs illuminated with neon
- signs with strobe or flashing lights
- signs that move or make noise
- roof signs
- signs that may mislead or confuse pedestrian or vehicular traffic
- signs on a natural feature such as a rock or tree
- portable signs

F. LIGHTING

1. ORIENTATION AND BRIGHTNESS: Areas should be well lit without shining light on neighboring lots.

C.G.72: Safety: Lighting should be provided in all public spaces, including parking areas, entries, gathering spaces and walkways. This lighting should enhance safety of movement for cars and pedestrians.

C.G.73: Color Rendition: Lighting type should allow good color rendition for adequate visual recognition.

C.G.74: Light Pollution: All building and site lighting should be hooded, equipped with appropriate shields, and directed to the intended area of illumination to minimize off-site light spillage onto adjacent roadways, neighboring parcels, and the night sky.

C.G.75: Placement: Outdoor light fixtures should be low intensity and placed as low as possible to provide adequate light and coverage, but never higher than twenty feet (20').

III. BUILDING DESIGN

A. BUILDING MASS AND SCALE

1. MASS: Building height, width and depth create visual building mass. Building mass should be designed to provide a distinctive edge to the streetscape and compliment the existing architectural pattern of the area.

C.G.76: Visual Reduction of Mass: Building mass should be managed using one or more methods, including landscape features that soften edges or create interesting lines; recessing a second floor over the first floor; using horizontal or vertical offsets in wall surfaces; varying facades on long expanses of building; strategic placement of large potted plants; and/or articulating design details or awnings around doors and windows. (Figs. 22 & 23)

C.G.77: Rooftop Equipment: Rooftop equipment should be concealed from adjacent properties by using compatible architectural features of the primary structure. (Fig. 23)

C.G.78: Recess Large Businesses: Anchor businesses such as large grocery stores, big box stores, and movie theatres should be slightly recessed from the street with smaller stores placed along the street to break up large expanses of wall and provide a pedestrian friendly environment. (Fig. 24)

C.G.79: Articulation of Blank Walls: Blank walls should be varied along the length of the building. Articulation methods may include a change in texture, color, or material; public art displays; landscaped planters; fountains; offsets; window and entry placement; or other varied design details.

C.G.80: Landscaping: When large blank walls are unavoidable they should be softened with landscaping features such as planters, vines and trellises.

2. SCALE: The proportion of a new building's features should be relative to the surrounding buildings' features to create balance.

C.G.81: Size: The scale of new buildings should be compatible with the surrounding neighborhood. (Fig. 22)

C.G.82: Varied Facades: Exterior facades should be articulated and varied to reduce the scale and uniformity of large commercial buildings such as grocery stores and big box retailers. The use of eaves, columns, pilasters, cornices, windows and window coverings, canopies, fascia and roofs should be proportionate with the primary building. (Fig. 23)

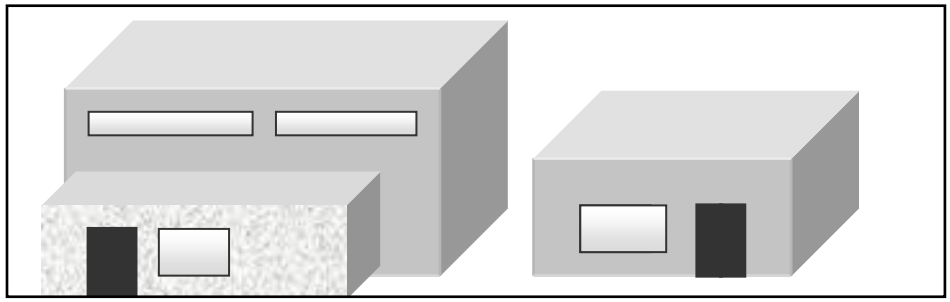


Figure 22: Varying the façade visually reduces the new, larger building's size.

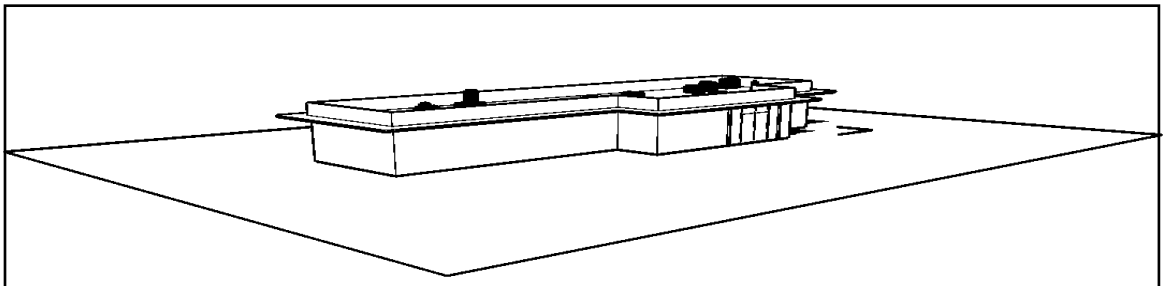


Figure 23: This building emphasizes use of architectural features such as an articulated façade, prominent front doors, hidden roof equipment, and an overhang that runs the perimeter of the building.

B. ARCHITECTURAL FEATURES

1. BUILDING DESIGN, MATERIALS, AND FINISHES: The design, materials and finishes of the building's façade, entryway and roofline should create visual appeal at the pedestrian scale.

C.G.83: Pedestrian Scaled Design Features: New commercial construction should incorporate pedestrian scaled design features to encourage pedestrian activity. Such design features may include display windows at the sidewalk edge; awning shade features, canopies or trellises at the storefront; accentuated or recessed entries; outdoor dining areas; landscaping, shade trees, or benches. (Figs. 7, 8 & 9)

C.G.84: Character and Shading: Architectural features such as overhangs, projections, reveals, awnings, canopies, trellises, and covered pedestrian walkways are encouraged to add character and provide shading. (Figs. 10, 21, 22, 23, & 24)

C.G.85: Entryways: Entryways should be oriented towards the predominant public view and should be clearly defined with accent colors or other architectural features such as canopies, overhangs, recesses, arches, tile work, or molding. (Figs. 10, 23 & 24)

C.G.86: Variation: Materials, finishes, and colors should be varied to create contrast and accent architectural features. (Figs. 22 & 24)

C.G.87: Exterior Materials: Building materials and finishes should be durable, easy to maintain and able to withstand local climate changes. Recommended exterior materials include masonry, plaster, stucco, textured block, and brick. (Fig. 24)

C.G.88: Discouraged Materials: Plasticized materials and high gloss finishes are discouraged.

C.G.89: Colors: Large areas of bright, intense colors are discouraged. Brighter accent colors should be used for trim, windows, doors, and key architectural elements.

C.G.90: Logos: Colors or logos identified with an individual company should not be incorporated as a primary architectural feature, but may be used as an accent feature to enhance the overall architectural theme.

C.G.91: Rooflines: Variations in rooflines should be used on larger buildings. Roof designs should be integral with the architectural design of the development and not detract from that design. Roof elements such as parapet caps, projecting cornices, and corner details can be used to define a roof. (Figs. 23 & 24)

Figure 24: This movie theatre uses various techniques to appear pedestrian scaled. The façade of the building is varied with details.

2. CONSISTENCY OF DESIGN: Building forms should respond to the natural environment or other existing developments so they enhance and enliven the character of the community or region.

C.G.92: Outbuildings: Outbuildings, such as storage areas and trash enclosures, should be architecturally compatible with the primary building (same type of materials and colors). (Fig. 25)

C.G.93: Service Station Islands: Service station islands should be architecturally integrated so that design character is compatible with the main building.

C.G.94: Overall Compatibility: Commercial buildings should be designed and articulated to improve the streetscape, enhance existing neighboring businesses, and improve overall economic vitality of the general area. (Figs. 23 & 24)

Figure 25: This trash collection and recycling enclosure uses similar building materials and colors to blend in with the primary buildings.

IV. SUSTAINABILITY

Commercial buildings should be designed in ways that promote energy efficiency and conservation of resources. Appendix B *Sustainability Design Guidelines* has information on sustainability and green building practices that relate to all built projects. In addition to the general measures listed in Appendix B, Commercial buildings should:

- Be designed in a way that utilizes passive solar heating and cooling in order to reduce energy cost and consumption. This is especially important for large commercial buildings such as big box retailers and grocery stores due to their size.

- Possess a light colored roof to reflect a large percentage of solar radiation in order to reduce HVAC loads and energy consumption.

- Use ceiling mounted fans to reduce heat stratification and provide air movement.

- Use low-flow plumbing fixtures, energy efficient fixtures, systems and appliances, wherever feasible.

- Utilize natural sunlight through skylights and energy efficient light fixtures to reduce energy consumption due to lighting.

Yolo County

RESIDENTIAL

Design Guidelines

YOLO COUNTY: Residential Design Guidelines

Table of Contents

I. INTRODUCTION

A. APPLICABILITY

The design guidelines in this section apply to any new development in areas zoned Residential Suburban (R-S), Residential One-Family (R-1), Residential One-Family or Duplex (R-2), Multiple-Family Residential (R-3) and Apartment-Professional Zone (R-4).

These guidelines are advisory and are intended to augment, but not conflict with, applicable zoning regulations and General Plan policies.

B. PURPOSE AND GOALS

The purpose of these goals is to guide new residential development, planned developments, and large residential care facilities in a sustainable manner that will result in a variety of housing options to meet the needs of a diverse population.

C. ORGANIZATION

This document separates residential design into two main categories: street system and circulation, and site and building design. Subtopics are addressed within each of these categories. Each subtopic begins with a guiding principle and is supported by design guidelines. Visuals are provided for clarification and illustration. A brief section on how to incorporate residential specific sustainable building practices is provided at the end of this document.

D. CREATIVE DESIGN

The graphics, examples, and illustrations provided in this document are conceptual and intended to inspire design professionals and promote quality design. In order to provide appealing residential projects in Yolo County, which accommodate a variety of needs, innovative design concepts are encouraged. Design elements should compliment and enhance surrounding development in terms of scale, mass, detailing, and building patterns. New development should respond to (but not necessarily mimic) the traditional development and architectural patterns of the region.

Though these guidelines are advisory, they reflect a strong commitment by the county to create neighborhoods that are attractive and welcoming. They are the standard to which projects will be evaluated. We recognize that for some projects not all of these guidelines can be met. In such cases, county staff is available to discuss these constraints with project proponents as early in the design process as possible. In this way, the spirit and intent of these guidelines can be met while guaranteeing the most effective use of private and public resources during design, review and approval, construction, and subsequent operations.

II. STREET SYSTEM AND CIRCULATION

A. ACCESS AND CONNECTIVITY

1. CONNECTIVITY: New residential development should provide for both internal and external connectivity, with an emphasis on restoring the traditional street grid. New development should strengthen the connection to town centers, schools, libraries or other civic buildings to promote a sense of stability and identity for residents.

R.G.1: Internal Circulation: New residential areas should provide safe internal circulation, with several points of access to connecting corridors.

R.G.2: Transportation: Safe access routes to and from new development should accommodate all forms of transportation: walking, bicycling, public transit, automotive travel, and emergency vehicles. Where possible, provide new bus stops or provide convenient access to existing bus stops and public transportation.

R.G.3: Area Access: Ensure safe and efficient access to neighborhood commercial areas, employment centers, adjacent subdivisions, natural areas, public open space, and any other nearby amenity.

R.G.4: Discouraged Development Patterns: Spatial separation of new development from surrounding neighborhoods by such means as remote location, minimal access points, perimeter sound walls, and abrupt transitions, are all strongly discouraged.

R.G.5: Gated Communities: Gated communities in any location are strongly discouraged.

Integrate logically placed pedestrian pathways that connect new subdivision neighborhoods and multi-family complexes to adjacent shops, restaurants, and other existing residences.

B. TRAFFIC

1. TRAFFIC CALMING: Traffic calming measures should be used in residential areas.

R.G.6: Traffic Calming Measures: Recommended traffic calming techniques may include, but are not limited to:

- Narrow streets
- "Slow points," such as curb- extensions and corner radius treatments
- Pedestrian amenities, street furniture, and landscaping
- Tree lined medians or landscaped strips
- Traffic tables
- Raised crosswalks or crosswalks with varied patterns and textures
- Traffic circles (round-abouts)

2. STREET HIERARCHY: A hierarchy of streets should be used in the design of new residential development. This hierarchy should consist of *neighborhood streets*, *collector streets*, and *arterials* in a grid pattern where possible.

R.G.7: Residential Streets: Single-family residences should be located on narrow neighborhood streets.

R.G.8: Collector Streets: Multi-family residential developments, residential care facilities, and public facilities, such as parks and schools, should be located on collector streets, which provide a balanced function of access and mobility.

R.G.9: Arterials: Arterials serve as major transportation corridors that provide a high level of mobility. New residential development should not be located on arterial streets, which would expose residences to nuisances and safety hazards.

C. OUTDOOR RECREATION SPACE

1. PUBLIC OPEN SPACE: Public open space should be an integral part of every neighborhood. A strong public realm is an important part of a healthy community. Residential developments are encouraged to integrate public open space into the neighborhood instead of paying in-lieu fees.

R.G.10: Availability: Public open spaces such as parks, "pocket parks", jogging paths and "green belts" should be made available and accessible to all residents.

R.G.11: Access: Locate public open space where residents can access them without having to cross arterial streets.

R.G.12: Pedestrian Crossing: Well-defined pedestrian crossings with signage, varied pavement texturing, or other traffic calming measures should be provided in the vicinity of public open spaces.

2. NATURAL AREAS: Existing site amenities such as wetlands, waterways, plant and animal habitats, existing native vegetation, and culturally significant landscapes should

be preserved and restored in order to maintain a healthy ecosystem, maintain the local character of the area, and enhance the design of new projects.

R.G.13: Preservation: Preserve and incorporate the above site amenities into public open space facilities wherever possible and appropriate.

R.G.14: Riparian Areas: Riparian zones should be kept in a natural state. Introduction of non-native plants near a riparian zone is strongly discouraged.

III. SITE AND BUILDING DESIGN

A. WALLS AND BUFFERS

1. PREFERRED BUFFER TECHNIQUES: Developers are encouraged to use commercial areas, public facilities, or open space areas as the primary interface between arterials and residential districts.

R.G.15: Sound Wall Buffer: The use of sound walls alone as a buffer is discouraged because sound walls interfere with the visual cohesion of the overall area, and do not provide inviting environments that encourage safe pedestrian traffic.

2. SOUNDWALL GUIDELINES: When sound walls are necessary they should have sufficient architectural variety to make them less objectionable.

R.G.16: Sound Walls: Sound walls should:

- Incorporate a landscaped buffer that is a minimum average of 20’ (twenty feet) wide, and never less than 10’ (ten feet) wide.
- Have architectural variety, such as offsets or use of varied materials and colors.
- Be landscaped with vines, shrubs, or trees.
- Incorporate frequent breaks, where appropriate, for pedestrian and bicycle traffic.
- Be of the minimum length to accomplish the needed result.
- Be used in conjunction with landscaping berms.

B. ORIENTATION

1. BUILDING ORIENTATION: Buildings should be positioned to benefit from solar access and micro-climates.

R.G.17: Solar Access: Building orientation should accommodate placement of windows on the north and south sides of the building. This will allow for more controlled solar access for winter heating and natural ventilation for summer cooling.

2. VISUAL EMPHASIS: Visual emphasis should be on the main living area or entrance to the home.

R.G.18: De-emphasize Garage: Human scaled design features should be used to visually de-emphasize the garage or parking areas. Possible methods to accomplish this include:

- Placing a porch at the front of the house.
- Projecting the second story out over the garage.
- Locating a detached garage behind the house.
- Recessing the garage further from the street than the main living area.
- Providing rear garage access from a private alley.

Both homes have a porch as the prominent feature. A recessed second story (left) makes homes of varying sizes architecturally compatible.

Compact development can make use of garages located on a private alley to the rear of the homes. The lack of garages visible to the street makes for a more inviting human scaled neighborhood (above right and left). Windows overlooking the alley increase safety (lower left). One private alley serves garages for homes on two different streets (lower right).

C. PARKING

1. LOCATION: Parking should be accessible and in close proximity to the home.

R.G.19: Resident Parking: Unless there are superseding environmental or topographic concerns, parking for residences should be located as close as possible to the house to allow for easy resident access. This is especially important in multi-family complexes, where residents may be required to park in a parking lot.

R.G.20: Apartment Parking: Carports or shaded parking should be provided for residents in apartment parking lots.

R.G.21: Guest Parking: Guest parking should be evenly distributed throughout the neighborhood to accommodate all guests.

R.G.22: Reduce Paved Parking Ares: In higher density areas, techniques should be used to reduce the amount of land consumed by driveways and parking. These include:

- Shared driveways, which allow for one driveway to provide parking and garage access for two or more homes.
- Rear access parking through use of a private alley. Locate windows in the rooms over the garage to face the alley for increased visibility and safety.

2. PERMEABLE SURFACES AND SWALES: Storm water should be allowed to percolate back into the water table through the use of permeable parking surfaces and/or landscaped swales.

R.G.23: Permeable Surfaces: Permeable parking surfaces (such as porous asphalt or porous concrete, "Grasspave," "Gravelpave," interlocking concrete blocks or high-strength recycled plastic grids) should be used where feasible to allow water to infiltrate back into the water table. Where impermeable surfaces are utilized, they should be kept to a minimum and the resulting runoff should pass through a permeable surface or be diverted to a landscaped swale before entering the storm drain.

R.G.24: Landscaped Swales: The use of landscaped swales or "bioswales" is encouraged to capture and filter storm water before it enters the storm drain system. Features of swales include:

- A drainage course with gently sloped sides (less than 6 percent), either meandering or straight designed to maximize the time water spends in the swale.
- A landscaped element filled with vegetation, compost and/or riprap designed to remove silt and pollution from surface runoff water.

The driveway for this house is semi-pervious, using gravel in the center, to avoid excess runoff. The garage is recessed from the house, making the front porch and entry the prominent view.

D. LANDSCAPING

1. PLANT CHOICE: New plantings should be native and drought tolerant, while existing vegetation should be retained where feasible. See Appendix A *General Landscaping Design Guidelines and Plant Selection Grid* for information regarding plant species that meet landscaping guidelines. County improvement standards for visibility requirements at intersections and driveways must be adhered to.

R.G.25: Native and Drought Tolerant Plants: Native and drought tolerant plants are encouraged in residential areas to reduce the need for excessive water consumption and fertilizer use.

R.G.26: Existing Vegetation: Mature trees and other prominent existing plants should be retained when building new residential developments.

R.G.27: Lawns: Lawn size should be minimized and used to accent a primary landscaping area that consists of native, drought tolerant plants.

Yards consisting of native drought tolerant landscaping can be lush and green, easy to maintain, and use less water than traditional lawns.

2. TREE PLACEMENT: Trees should be used to shade streets and reduce the cooling loads of home air conditioning units. See Appendix A for information regarding plant species.

R.G.28: Shade Tree Canopy: A minimum of one large shade tree per house should be placed along the street side to create a shade canopy over the street in single-family residential zones.

R.G.29: Shade Trees: In addition to street side shade trees, another shade tree should be placed, where appropriate, to provide shading for the house's roof and south-facing windows from summer sun.

R.G.30: Landscaped Islands in Parking Lots: Parking lots in multi-family residential areas should include landscaped islands. The landscaped islands should include adequate tree plantings to shade the parking lot by at least 50% within 15 years.

Street side planter strips protect water quality by capturing chemical laden runoff from yards and also provide a place for shade trees along the street, placed to avoid underground utilities and with tree root barriers to protect hardscape.

3. SCREENING AND BUFFERING: Plants should be used for screens and buffers where appropriate. See Appendix A for information regarding plant species.

R.G.31: Fences: Fenced courtyards and decorative gates create a sense of entry and may be provided at building fronts.

R.G.32: Privacy Screening: Trees, shrubs or vines should be used to provide privacy where home windows face public facilities, collector streets, or arterials.

R.G.33: Equipment, Utility Boxes, and Sound Walls: Shrubs or other ornamental plantings should be used to screen mechanical equipment, sound walls, and utility boxes.

E. LIGHTING

1. FIXTURE DESIGN AND SCALE: Street lighting fixtures should be appropriate to the architectural style of the residential development and should provide lighting without glaring onto adjacent properties or the night sky. Lighting shall be as per local jurisdiction or utility standards.

R.G.34: Street Lighting: The design and scale of lighting fixtures should be compatible with existing lights. Where no lights previously exist, the fixtures should be human scaled and attractively designed to compliment the architectural style of the homes.

R.G.35: Orientation and Configuration: All lighting fixtures should provide adequate lighting where required, yet be oriented in a manner that does not produce glare into homes or at oncoming traffic. The fixture configuration should prevent the escape of light pollution into the night sky.

R.G.36: Walkway Lighting: Vandal resistant bollards or lights mounted on short posts are encouraged along walkways. Where overhead lighting is used, fixtures should be mounted low enough to create a safely lit walkway while providing a reasonable balance between fixture height and the number of fixtures required.

F. ARCHITECTURAL DESIGN

1. EXTERIOR DESIGN: Buildings should respect and contribute to an environment that is enjoyable for the inhabitants and neighbors. Entrances and fenestration should be placed to enhance the streetscape and provide for public safety.

R.G.37: Architectural Style: Exterior elevations should demonstrate a design style or a logical combination of styles and utilize architectural detailing that is consistent with that style. If the adjoining neighborhood has a style of architecture that has historically contributed to an enjoyable streetscape, new development should respect the style of the existing community. New construction need not mimic existing homes; innovation and creativity are encouraged.

R.G.38: Door Orientation: Home entrances should be oriented toward the predominant public view, and front doors of residences should be visible from the street.

R.G.39: Window Orientation: Window orientation should afford "eyes on the street." Windows facing adjacent properties should be oriented in a manner that ensures privacy of neighboring residents. Windows of adjacent houses should not directly align with each other. In circumstances where windows unavoidably impose on a neighboring resident's privacy, landscape screening or trellises should be provided.

R.G.40: Streetscape Enhancements: Homes should be designed to enliven the streetscape and provide "eyes on the street." Some methods include:

- Bay windows
- Porches and verandas large enough to provide usable open space and a view to the street
- Overhangs and arbors

R.G.41: Facades: New development should respect the style of existing development.

2. ARCHITECTURAL DETAILS: To create residential areas that are attractive and interesting, individual structures should include a variety of architectural details, complimentary colors, and the use of quality materials.

R.G.42: Recommended Materials: Traditional housing materials and design are encouraged in order to enhance the existing architecture of the community, while supporting the use of sustainable design products.

R.G.43: Design Elements: Each structure should include a variety of complimentary design elements. Examples of design elements that can be used to create visual interest include:

- Adding dormers with windows or vents.

- Decorating windows with false balconies, flower boxes and/or shutters.
- Using a variety of window mullion patterns and mullion thicknesses.
- Adding recessed or bay windows.
- Incorporating "pop-outs," overhangs, and/or trellises made of various materials such as exposed wood, painted wood or composites.
- Facade detailing such as false beams, angled braces, corbels, trim, and brick or stone veneers (veneers covering the entire height of the first story are strongly encouraged).
- Using decorative attic vents to add architectural detail.
- Using structural members as a design element.

R.G.44: Neighborhood Design Elements: Neighborhoods should include houses with a variety of architectural styles that represent the diversity of Yolo County. From house to house, developers should vary the color, style, and materials of:

- Front doors
- Garage doors
- Gutter profiles
- Wall textures, such as board and batten, lap siding, stone, brick, and/or stucco.
- Trim elements
- Porches
- Roofing and rooflines
- Windows

R.G.45: Structure Color Schemes: Each structure should be painted a minimum of three complimentary colors (one base color and at least two accent colors).

R.G.46: Neighborhood Color Schemes: Neighborhoods should include buildings with a variety of color schemes. For example, entire neighborhoods where all buildings are painted a variety of beige are discouraged.

3. ROOF DESIGN: Roof designs and materials should be architecturally integrated with the design of the dwelling.

R.G.47: Roof Styles: Architectural interest at the roofline may be created by varying heights, directions and pitches. A roof pitch of 5:12 or greater is encouraged. Additional roof details and embellishments such as cupolas, dormers, louvers, vents, lanterns, pinnacles, finials, compounded fascias, parapets cornices, and eve moldings are encouraged.

R.G.48: Roofing Materials: A variety of roofing materials such as, but not limited to, stone, slate, concrete or clay tiles, metal, or architectural grade high-profile asphalt shingles should be used throughout the neighborhood. The use of photo-voltaic cells, whether or not integrated into the roofing, is encouraged.

R.G.49: Sustainable Materials: New development should consider the use of sustainable roofing materials and green building technologies where possible.

R.G.50: Mechanical Equipment: Roof mounted mechanical equipment is discouraged where visible. Mechanical equipment should be screened with architecturally compatible materials and colors, with noise attenuation measures incorporated into the design.

R.G.51: Architectural Details: The following photos illustrate some of the architectural details that are encouraged by Yolo County.

- Use of complimentary colors (one base color and two accent colors)

- Detailed garage doors with windows
- Brick, stucco, and lap siding
- Architecturally compatible light fixtures that enhance overall design

- Angled braces and corbels
- Shutters on windows
- Board and batten below roof
- Shake siding on second story
- Use of brick veneer on entire first story
- Mullions in windows

- Variation of roof materials between homes

- Emphasized trim above garage door and entrance doorways
- Stone facade on porch
- Vents used as decoration

- Architecturally compatible street light fixture
- Trellis over the window
- Wrought iron metal accents
- Paneled garage door with windows

4. MASS AND SCALE: Building mass and scale should be compatible with the existing community.

R.G.52: Large Wall Expanse: Exterior walls should include architectural design elements to break up large expanses of wall.

R.G.53: Building Placement: Building placement should be varied along the front setback to provide interest and an aesthetically pleasing streetscape.

G. AFFORDABLE HOUSING

1. INTEGRATION WITH OVERALL DEVELOPMENT: All residential developments should integrate affordable housing with market rate houses, and include the provision of similar amenities.

R.G.54: Separation Discouraged: Affordable units should be dispersed throughout the development. Separate groups of affordable homes with a distinctly dissimilar appearance from the rest of the development are strongly discouraged.

R.G.55: Half-Plexes: Integration of affordable units in terms of scale can be accomplished by creating half-plexes or "zero-lot line" homes throughout the development.

R.G.56: Lot Size: Reduced lot size is encouraged as a technique to provide affordable housing.

R.G.57: Private Yards: Each affordable unit should have access from the living area to usable private open space.

Both pictures illustrate integration of affordable (duplex) housing within neighborhoods of single-family homes.

2. APPEARANCE: Affordable houses should visually blend with market rate houses in terms of style, detailing, and materials.

R.G.58: Architectural Style: Architectural styles and techniques, such as step backs, varied rooflines and wall surfaces, should be used to create interest and blend affordable housing with market rate housing.

R.G.59: Materials and Architectural Details: Affordable units should include the same types of materials and architectural details as market rate homes.

Small cottages, which are integrated into neighborhoods with larger homes, can provide affordable housing for seniors, singles, and small families.

This example of compact development shows attached units with garages facing the main street. Note that the garages are recessed farther from the street than the porch.

H. UNIVERSAL DESIGN PRINCIPLES

1. ACCESSIBILITY: Residential units should be designed with accessible design features in order to meet existing and future housing needs for all county residents.

R.G.60: Housing Diversity: A variety of home types and sizes with accessible features should be distributed throughout new developments to provide housing for a diverse population.

R.G.61: Interior Features: Counters, storage and cabinetry should be located with a view toward allowing use and access by all individuals, regardless of mobility impairments.

R.G.62: Hardware: Lever type hardware and fixtures, such as door levers, faucets, and rocker type controls should be provided in all residential units.

R.G.63: Grab Bars: Blocking in bathroom walls should be provided to permit the installation of grab bars in the shower and near the toilet. Additional blocking should be provided behind towel bars, toilet paper holders, and other wall mounted accessories.

2. WHEELCHAIR ACCESSIBILITY: Residential units should be designed in a manner that is accessible for wheelchairs.

R.G.64: Hall and Doorway Width: Hallways should be at least 42 inches wide in order to accommodate wheelchairs. Doors should be a minimum of 32 inches wide, except entrance doors which should be a minimum of 36 inches wide.

R.G.65: No-Step Entrances: At least one entrance to each unit should be designed without stairs, with level landings and accessible thresholds to allow for wheelchair access.

R.G.66: Bathrooms: Bathroom layout should allow for "adaptability." Design considerations should include, but are not limited to:

- Floor space to maneuver a wheelchair. Toilets should be located 18" from the side wall to the center of the toilet, with a clear space of 36"x48" in front of the toilet.
- Roll-in shower with removable curb (collapsible curbs are available for glue-in application.)
- Removable or fold back cabinet doors to provide knee space under the sink
- Shelves, accessories, storage, and mirrors placed at an accessible height. Medicine cabinets should be placed to the side of the sink countertop instead of behind it, to lessen the "reach" distance.

IV. SUSTAINABLE BUILDING PRACTICES

A. DEVELOPMENT LOCATION

If feasible, new residential developments should be placed either immediately adjacent to or within existing infrastructure. This has numerous benefits for builders and

residents, such as reduced infrastructure costs and increased availability of transportation alternatives. See Appendix B: *Sustainability Design Guidelines* for more detailed information.

B. BUILDING ORIENTATION

Residences should be situated on an east to west axis and oriented in a manner that allows them to take advantage of passive solar lighting and heating. See Appendix B for more detailed information.

C. GREEN BUILDING PRACTICES

Building practices should be considerate of environmental impacts. This can be done using a number of simple methods such as recycling job site construction and demolition waste, donating unused building materials, and substituting solid lumber for engineered lumber. See Appendix B for more detailed information.

D. ENERGY CONSERVATION FEATURES

Residences should be designed and built with future residents' energy consumption in mind. Installing energy efficient windows, insulation, and appliances can reduce future energy use. In addition, installing light colored roofing, whole house fans, solar panels, and efficient HVAC units can significantly reduce heating and cooling loads. See Appendix B for more detailed information.

E. SUSTAINABLE SITE DEVELOPMENT

Several strategies have been developed to manage and cleanse storm water before allowing it to empty into the storm drain system or permeate down into the water table. Bioswales and "cleansing biotopes" (a man-made catchment area containing gravel and aquatic plants to remove sediments and nutrients from the water), are encouraged and should be considered as alternatives to underground culverts and concrete swales.