CHAPTER 6

RESIDENTIAL DESIGN

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Creating Great Neighborhoods.
The following Residential Design Guidelines are included in this Specific Plan to ensure that the creative vision for Rio d’ Oro is successfully implemented through the design and development of individual neighborhoods within the Specific Plan Area. These guidelines provide future builders and designers with clear direction regarding the site planning, architectural design and landscaping of residential neighborhoods to establish a consistent, high quality design character that will convey a common theme, establish a strong sense of unity, and achieve the guiding principles of the Specific Plan.

6.1 Purpose and Intent

The overall intent of the Residential Design Guidelines is to create unique villages and neighborhoods, integrating good site planning techniques with well-defined architecture and landscaping. These guidelines will establish the overall “look” and “feel” of residential areas.

These guidelines are not strict requirements, but allow flexibility for architects, landscape architects, developers, builders, and others involved in the design process. Variation and customizing within the context of the guidelines is encouraged in order to achieve individually distinctive homes and neighborhoods while maintaining a consistent theme. Through collaboration between the master developer, the builder(s), and the County, Rio d’ Oro is destined to set the bar for residential design in Butte County.
6.2 Neighborhood Crafting

Neighborhoods serve as the primary building block of a successful community. Visually rich street scenes, easy pedestrian access to key facilities and pedestrian-scaled architectural components should strengthen the community’s small town “Americana” design theme. Functional neighborhoods exhibit social and physical cohesion resulting from suitable scale and physical form. Neighborhood homes will be arranged and scaled in a manner that promotes a sense of intimacy and orientation to village features and organizing elements. Implementation of the following key design concepts ensures high quality neighborhood designs:

• Creating Neighborhood Focal Points
• Maximizing Neighborhood Connectivity
• Orienting buildings to maximize solar exposure
• Integrating landscaping with architecture
• Creating superior streetscenes through massing and plotting
• Continued excellence and diversity in Architecture

6.2.1 Neighborhood Focal Points

Individual subdivisions alone are not a practical definition of a neighborhood. Functional neighborhoods exhibit social and physical unity resulting from appropriate scale and physical form. Neighborhood homes should be positioned and scaled in a manner that promotes a sense of intimacy and orientation to design features and organizing elements. The organizing elements for larger neighborhoods or those neighborhoods that are far removed from Village greens, shall be a neighborhood green. Neighborhood Greens are discussed in greater detail in Chapter 4 and their general locations have been indicated on the Land Use Plan in Chapter 2. Exhibit 6-1: Conceptual Low Density Neighborhood Design and Exhibit 6-2: Conceptual Medium Density Neighborhood Design illustrate conceptual site plans that establish neighborhood focal point. Smaller neighborhoods may be organized around additional neighborhood greens that are not indicated on the Land Use Plan, common recreational facilities associated with these neighborhoods (such as those in multifamily developments), paseos, vistas, significant buildings or other features that promote a sense of community and a sense of place.

GREEN CONCEPT

Promote community activity and engagement by creating spaces where people can come together with neighbors and friends.
Successful neighborhoods are designed to provide a social environment that allows residents to easily satisfy their basic social needs of self-identity, personal security, and citizenship. The arrangement of parks and open spaces will encourage outdoor social experiences that help residents relate to other individuals as neighbors.

6.2.2 Neighborhood Connectivity

An important principle of neighborhood crafting is to provide pedestrian and vehicular linkages between neighborhoods and key community facilities. The key to achieving a functional multi-generational living environment is allowing people to easily and safely walk by maximizing the quantity and quality of auto free spaces. The Rio d’ Oro plan emphasizes this connectivity by providing an extensive network of trails along open space corridors, locating each park adjacent to these trails and proving a street system that allows numerous sidewalk connections throughout the community. Basic site planning guidelines that achieve connectivity include the following:

- Block lengths that do not exceed 400-600 feet in length in accordance with new urbanist principles. Paseos may be used on a limited basis to break up longer blocks (Street intersections are preferred).
- Limited use of cul-de-sacs so that no more than 10% of the length of all streets in a neighborhood are located within a cul-de-sac street.
- When cul-de-sacs are used, provide openings at the end of each cul-de-sac to allow pedestrian and bicycle connections to adjacent areas.
- Provide sidewalks on both sides of all streets. The only exception to this rule are streets fronting onto the arroyos since the arroyos themselves will contain trails.

**GREEN CONCEPT**

Promote communities that are open to the general public and are connected to one another.

**GREEN CONCEPT**

Provide multiple vehicle connections and intersections to distribute traffic evenly.

Exhibit 6-1: Conceptual Low Density Neighborhood Design and Exhibit 6-2: Conceptual Medium Density Neighborhood Design illustrate conceptual site plans that establish a high level of connectivity.
Exhibit 6-1: Conceptual Low Density Neighborhood Design
Exhibit 6-1: Conceptual Medium Density Neighborhood Design
6.2.3 Solar Orientation

Homes within Rio d’ Oro should be designed, to the greatest extent feasible, to take advantage of passive solar design and orientation. This will help reduce heating and cooling costs, provide more comfortable indoor spaces, and reduce energy use, thus reducing the community’s output of greenhouse gases.

**GREEN CONCEPT**

Orient buildings to maximize solar exposure and take advantage of solar cooling and heating thereby reducing energy use.

Maximizing solar exposure can be achieved through the careful design of street networks. By aligning the majority of longer roadways and block lengths within 15-degrees of east/west access, each home’s south-facing exposure to the sun is maximized. This solar exposure allows each home to capture solar heat in the winter reducing the need for artificial heating and energy use. This also allows for the installation of efficient photovoltaic panels or film to provide an alternative energy source for each home.

Solar exposure is further emphasized through the careful placement of windows and landscaping. Windows should be maximized on south-facing exposures to the greatest extent possible to maximize light and heat entering the home in the winter, reducing the need for heating.

During the hot summer months encountered in Butte County, passive solar cooling will also be an important consideration to reduce the use of air conditioning. This is achieved through careful placement of windows, shade trees, and other shade devices. Windows should be minimized on west-facing exposures to avoid overheating of the home. Deciduous trees and other adjustable shading mechanisms may also be provided along west-facing frontage to reduce heat gain in warmer months. Deciduous shade tree plantings, operable windows, and adjustable shading devices should also be considered on south-facing exposures to provide cooling in the hot summer months while still allowing passive solar heating in winter months.
6.2.4 Integrated Landscape and Architecture

A strong integration of “naturalized landscape” into built areas will create a soft and harmonious balance between man and nature. A sharp contrast between the “inside” and the “outside” of the neighborhoods should be avoided. Instead, landscaping should emphasize gradual transitions in plant palette and thematic landscape development from edge to core.

The edges between adjacent land uses are designed as linear open spaces that connect individuals to the public realm and help to define neighborhood character. These transitional landscapes are decidedly natural in appearance and serve to provide safe passage from home to parks, school, and shopping.

Single-family detached neighborhoods should emphasize streetscape enhancement with the use of parkway tree planting and front gardens that flow together. Primary connections to open space and adjacent neighborhoods will be by sidewalks, tails and paseos.

Residential landscape plant palettes should use a majority of trees, shrubs, and ground covers that are native to the local habitats on and near the site. The existing woodlands are composed of four species: Valley Oak, Blue Oak, Interior Live Oak, and California Buckeye. The Buckeye and Blue Oaks are deciduous trees found within the steeper, north- and east-facing ravines. Blue Oaks are the dominant species. Valley Oaks and Interior Live Oaks are found at the edges of ravines and closer to ridge lines. These tree species should be used in linear open spaces, paseos, and parks associated with residential villages. The Interior Live Oak and Valley Oak are suitable for use along streets and in front yards. Several other primary and secondary street trees have been approved for this project. See Appendix C, Plant Palette E for a list of trees and preferred uses.

The layout of residential villages should emulate the character of the natural environment. This is achieved by:

- Designing each village in relation to the arroyo with street patterns conforming to the topographic form of the arroyo.
- Integrating elements of the natural drainage patterns associated with the arroyo.
- Protecting and expanding existing groves of Blue, Valley, and Interior Live Oak trees.
- Preserving distant views and vistas.

**GREEN CONCEPT**

Utilize native and noninvasive plants in residential landscaping to reflect the adjacent natural landscape and ensure perpetuate the long term health and viability of native habitats.
6.2.5 Pedestrian Friendly Streetscapes

Each street section should have a significant component of planting with an emphasis on pedestrian comforts. Front yards should be designed and maintained to invite social interaction. Features such as enhanced paving and front porches are encouraged. Front yard public facility easements (PFE) should be sufficiently wide to accommodate additional street trees.

A majority of streets in Rio d’ Oro should have a primary and secondary street tree. One tree type would be located in the parkway strip and the other in a PFE behind the sidewalk. Landscaped parkways should be a minimum of eight feet wide, measured from back of curb to sidewalk. Street trees may also be provided in tree wells and planters instead of parkways in more urban areas such as the Commercial Village and the multi-family village, Village 4. Additional landscape setbacks at side yards should be provided whenever possible.

Pedestrian safety should be a key design consideration. Bulb-outs at intersections should be used to shorten the distance of crosswalks and provide additional landscaped areas. Street lighting should be adequate to light both the travel lanes and the walkways.

GREEN CONCEPT
Create pedestrian friendly streets to promote walking, bicycling, and other alternative modes of transportation other than vehicles.
6.2.6 Continued Excellence and Diversity in Architecture

An important community design goal in Rio d’ Oro is the creation of varied and interesting street scenes. In order to achieve this, an eclectic variety of architectural styles and home designs, inspired by those historic styles found in Butte County, shall be provided within each neighborhood and throughout the community. Appropriate styles include Spanish, Mission, Craftsman, Farmhouse, Cottage, Monterey, Ranch, Colonial, American Traditional or similar compatible styles that reflect early California architecture. Styles should be selected to provide differentiation between neighborhoods as well as villages while still maintaining the “Sustainable Small Town Americana” design theme. The following architectural style and plan requirements must be met for within each neighborhood:

- A minimum of three (3) floor plans (4 preferred).
- A minimum of three (3) elevations per plan using a minimum of two (2) styles. If only two (2) are selected, they must be significantly different in appearance.
- A minimum of four (4) different color schemes per elevation.
- A minimum of four (4) different architectural styles per neighborhood.
- A minimum of two (2) different garage placements for single family neighborhoods (See garage placement in Section 6.4).
- A differentiation in roof forms and heights between plans.
- At least one plan in each neighborhood should consider a single story “living” design that might consist of a single story plan, a “master-down” or a “dual-master” bedroom configuration. This not only provides the opportunity for multi-generational living and dual-single markets, but provides a distinctly unique floorplan.

Floorplans, elevations, and colors and materials boards shall be submitted, reviewed, and approved by Director of the Butte County Department of Development Service or his/her designee prior to issuance of building permits for each neighborhood.
6.2.7 Superior Streetscenes Through Plotting

Rows of homes seen from a distance or along arterial roads are perceived visually by their contrast against the skyline or background and their relationship to adjacent homes. Therefore plotting of each neighborhood and the assignment of elevations and color schemes plays an important role in creating superior streetscenes.

Floorplans for each lot should be selected to provide a diverse and deliberate mixture of plans throughout the neighborhood. To the greatest extent feasible, the same floorplan should not be repeated on the lot directly behind, next door, or across the street. Plans should also be mixed to avoid a repetitious pattern within the same street and along adjacent streets.

When plotting of the same plan cannot be avoided, the adjacent plan should be assigned a significantly different elevation style and/or color scheme to create a distinction between the two homes. In no instance shall the same plan and elevation be combined immediately adjacent to one another, i.e., across the street or next door.

“Reverse plan” plotting along streets (“flipping” of footprint to reduce repetition of garage placement and consolidating living space massing) provides another level of diversity in the streetscape. When the same floorplan is located across the street or on the lot behind, reversal of floorplans should be avoided since this may result in windows facing one another, allowing neighbors to see inside each other’s homes.

Color schemes and elevations should also be assigned to provide a diverse and deliberately haphazard mix of plans throughout the neighborhood. In no instance shall the same color scheme be combined immediately adjacent to one another, i.e., across the street, next door, or on the lot behind.

To provide more interesting neighborhood streetscenes, variable front-yard and side-yard setbacks are encouraged. This may be achieved by varying the yard setbacks along streets through building placement or through floorplan design. Variable lot width programs also provide a varied streetscene.
6.3 Architectural Design Theme

The architectural design character of Rio d’ Oro will be one of continuity, individuality, and compatibility. In following with the “Sustainable Small Town Americana” design theme, the design character of residential architecture should include the following:

- Simplified massing
- Floorplans based on a 24” module
- Prominent single story elements near the street
- Relatively steeply pitched roofs (5:12 or greater)
- Generous use of eaves and overhangs
- A look of “permanence” and shelter
- Use of Stucco, wood, and stone building finishes
- Shingled roofing materials or concrete style as appropriate to style
- The building, not the parking, remains the primary emphasis of the front elevation.

These physical design characteristics eventually led to a number of the articulated architectural styles that can be found in the older parts of Butte County.

A strong focus will be placed on elegant architectural design within Rio d’ Oro. New evolutions in home design will be a hallmark of the community with a wide variety of home sizes, prices, and functional parameters featured. Two-sided elevations for corner lots, varied streetscapes, private outdoor spaces, raised landscape islands, non-repetition of elevations and other architectural components are required. An equal level of design quality will be achieved within all neighborhoods.

A balanced approach will be taken regarding the level of architectural diversity. Architecture of should exemplifies the history and lifestyles of the Butte County region. Generally, architectural styles should be based upon these heritage styles to illustrate the richness and diversity of the region.

Architectural and site design criteria relate to the physical structure and surrounding landscape of the individual homes and lots within each neighborhood. These guidelines are organized to provide general design criteria followed by more detailed design criteria for particular land uses and building types.
6.4 Single Family Homes

The following design guidelines provide clear direction to future builders, architects, and landscape architects who are designing and constructing single family neighborhoods within Rio d’ Oro.

6.4.1 Building Form and Massing

Massing of individual homes within Rio’ d Oro should be simple and reflect the architectural style of the home. This requires the careful application of elevation styles to appropriate floorplans. For example, the strong two-story vertical massing of colonial style homes is most compatible with a simple rectilinear two-story stacked floorplan while the asymmetrical two-story massing or single story massing of a craftsman lends itself better to second floor recessed or single story plan.

Builders are strongly encouraged to develop floor plans that are responsive to both architectural style objectives as well as energy efficient building objectives. These two objectives can be satisfied by creating simple floor plan forms which minimize jogs and avoid unnecessary complicated massing solutions. Designs using a 24-inch module also promote more efficient framing by reducing the amount small unusable pieces of left-over lumber.

**GREEN CONCEPT**

Design homes on a 24’ module to use lumber more efficiently and reduce waste.

Building mass should reflect interior uses within the repertoire of forms for the chosen architectural style while interior mass and form can be manipulated to improve the streetscape.

As appropriate to style, single story elements should be provided to reduce the visual dominance of the home and establish pedestrian scale along the streetscape. Examples of single story elements are as follows:

- Porches (6’ min. depth)
- Single story living space that extends in front of the main form of the home
- Pop-out gable elements
- Bay window
- Porte-cocheres
Two-story massing can occur along the streetscene, reinforcing a “two-story residential” character. Third-story elements can be designed to occur at the rear of the project or interior, away from public views, or staggered with two-story massing to create variety.

Variety in building form ensures an interesting front elevation and adds to a home’s curb appeal; therefore, articulation in front elevations shall be required as follows:

- Articulation of wall planes longer than 40 feet in length as appropriate to style.
- Projections and recesses of two feet or greater to provide shadow and depth (includes architectural elements such as bay windows and pop-outs).
- Where appropriate to style, variable setbacks of five feet or more to different parts of the home to establish vertical and horizontal massing breaks.
- Varied garage placement

6.4.2 Solar Roofs

Roofs should consist of a variety of appropriate roof forms including hip and gable roofs. Roof pitch should be appropriate to style and should be at least 5:12 to maximize solar exposure. Roofing materials should consist of composite shingle or flat concrete tiles to ensure long-term durability and reduce the risk of fire. Materials should be consistent with the architectural style of the home.

Roof colors should be light to medium to reduce heat gain and maintain a comfortable indoor air temperature. Roofing materials should have a Solar Reflectance Index (SRI) of 29 or greater.

GREEN CONCEPT  
Maintain light color rooftops with a high solar reflectance to reduce the creation of heat islands and to maintain comfortable indoor air temperatures, thus reducing the use of energy for heating and cooling.

GREEN CONCEPT  
Use durable roofing materials to reduce the need for replacement and reduce waste.

GREEN CONCEPT  
Design roofs to maximize solar exposure for the potential installation of solar panels or photovoltaics.
Roofs should be designed to maximize southerly exposure for passive heating and allow for the potential inclusion of photovoltaic panels. If photovoltaic panels are provided by the home builder, they should be sited and designed to reduce their visual impact to the streetscape. This may include integrating them into the roof design if practicable.

Rakes and eaves shall be provided, as appropriate to style, to provide additional shading for windows and passive cooling of the home. Rafter tails, when exposed, shall be a minimum of four inches and painted or stained

GREEN CONCEPT { } Provide deep overhangs as appropriate to style to provide additional shade and interior cooling, reducing the need for air conditioning.

6.4.3 Walls

The colors and materials used in Master Plan neighborhoods must reflect a general contextual theme of harmony with the surrounding topography and neighborhood character. The architectural style palette selected will contribute to this goal, as each color palette has a historic lineage that shares this “common sense” approach to the use of materials and colors indigenous to the region and California. New interpretations of these classic combinations of materials and inherent colors are encouraged as they relate to a general feeling of neighborhood unity.

GREEN CONCEPT { } Use durable siding materials to reduce the need for replacement and reduce waste.

- Wall finishes should be durable and high quality.
- Wall finishes should be appropriate to style.
- Wall finishes should include two or more materials as appropriate to style.
- Wall finishes should terminate on an inside plane to avoid a false appearance.
- Colors should be appropriate to style.
- Colors should be used to establish depth and shading. Color changes should occur on an inside plane.
Permitted finishes include:

- Stucco - light to medium sand finish ("Spanish Lace finishes prohibited).
- Exposed masonry walls (brick, slump block, and split face).
- Stone brick, adobe, and brick veneers.
- Horizontal Plank siding.
- Board and batten siding.

Due to the high fire hazard potential within the Special Planning Area, materials on the exterior of all homes must be resistant to fire or fireproof as much as possible, considering design, home style, and cost parameters.

A variety of natural-looking materials and colors must provide the diversity required for visual interest, while unifying the homes with their settings and creating a timeless appeal. The primary purpose of the architectural color palette selection is to avoid monotony and provide a variety of color schemes while still maintaining a common theme or unifying concept.

- Each elevation should have a minimum of three (3) colors; four (4) is preferred. For example, one (1) body color, one (1) trim color, and two (2) accent colors.
- Individual color schemes should be appropriate to the architectural styles with a harmonious selection of accent materials, roof profiles, and colors.

**GREEN CONCEPT**

Use local, recycled, non-toxic, and/or readily renewable materials and finishes to conserve resources, reduce energy consumption associated with the manufacturing and transport, and improve air quality.
6.4.4 Doors and Windows

A variety of window shapes and sizes should be used on each home appropriate to architectural style. Windows should be designed and placed to work with inside uses and provide "eyes on the street," creating safer pedestrian street environments. Window placement and design should also consider solar orientation and the window’s relationship to eaves, overhangs, and trees so that solar exposure is maximized in winter and minimized in summer.

Recessed windows, if provided, are encouraged to be a minimum depth to achieve a cast shadow that is proportional to the window, consistent with the architectural style. Style appropriate grates, shutter, hardware, shading devices and accents are encouraged to reinforce architectural style.

**GREEN CONCEPT**

Design and locate windows and associated design features to provide passive cooling and heating of interior spaces.

Windows should be energy efficient to ensure comfortable indoor temperatures during all seasons and minimize the need for mechanical heating and cooling. Energy efficient windows are dual paneled with a low U-factor. A low Solar Heat Gain Coefficient (SHGC) is preferred for all windows except possibly for those windows on the north side of the house, where solar heat gain may be desired. Window frames should be constructed with materials that have low-conductivity such as vinyl or vinyl-wrapped frames. Metal window frames are prohibited.

**GREEN CONCEPT**

Install energy efficient windows on all new homes.

Windows and entry features should be designed appropriately to the overall mass and style of the home. An appropriate level of detail and trim at entries and windows should be provided to enhance the architectural style of the home. Doors should be designed according to style. Doors should be oriented toward the street or otherwise enhanced through design, lighting, or landscaping to make them a prominent feature of the house and emphasize their importance. Front doors shall be protected by a recessed, porch or other covered element to protect homeowners from rain.
6.4.5 Lighting

Residential light fixtures should be designed to convey the architectural style of the home. Lighting fixtures should be chosen according to location and use of particular spaces to ensure adequate light and ensure energy efficiency. General lighting should include fixtures that provide a broad wash of light across all surfaces and spaces of the room while task lighting and accent lighting, such as canister lights and pendant lighting, should be limited to only illuminate specific spaces or surfaces as needed or desired.

Exterior lighting of residential homes and lots should be designed to reduce sky glow and limit light trespass onto neighboring properties. In lanes, wall mounted lighting is preferred to pole mounted lighting to save space and ensure light is directed only to those areas necessary.

- Where appropriate, use motion censors, photo sensors, timers, and dimmers both indoors and outdoors.
- Ensure exterior fixture lumens are emitted straight down (90 degrees or higher from the lowest point.)
- Design exterior lighting to produce no more than 0.01 horizontal foot candles 10 feet beyond the property line.
- Consider window placement of adjacent homes in the design and location of exterior light fixtures.
- Install fluorescent lighting in appropriate areas inside and outside the home, limiting incandescent lighting to specific areas.

**GREEN CONCEPT** Design interior and exterior lighting of single family homes to promote energy efficiency, reduce sky glow, and limit light trespass onto neighboring properties.

6.4.6 Details

Additional details such as pot-shelves, balconies, grates, accent tiles, and other style appropriate design elements are encouraged to enhance architectural character and break up massing of large wall planes.

When provided, balconies should be designed as an integral part of the structure by incorporating style appropriate eaves, supports, and railings.
Exhibit 6-3: Typical Garage Configurations
6.4.7 Garage Design

The home and front yard, rather than the garage, must be the primary emphasis of the front elevation of new homes. Garages should not be forward of the building’s living space for any single-family builder parcel. Minimize the impact of garages facing the street by techniques such as varying garage-door patterns and utilization of deep-recessed door techniques, varying colors, splitting one large door into two (2) single doors, or using alternative garage configurations such as corner garages and detached or deep-recess garages.

De-emphasizing the garage door places greater importance on home architecture. To this end, a minimum of 30% of all front-loaded single-family homes in all villages and neighborhoods should include an alternate garage treatment, as defined below and in Exhibit 6-3: Garage Configurations.

- **Shallow-recess Garages** - When garages are less than 25' behind the front property line, no garage face may be less than six feet (6’) behind the living space or full porch (porch depth minimum is 6 feet.)
- **Mid-recess Garages** - Create plans that place the garage at varied locations on the homesite. Mid-recessed garages have strong emphasis on the living space of the home, with flexibility in exact depth of the garage from the front of the street.
- **Deep-recess Garages** - Set the garage back to the rear of the lot. Garages may be attached or detached. This achieves more living space toward the street and creates additional usable side yard outdoor space.
- **Corner-Lot Garages** - When grades allow, it is strongly recommended that a floor plan layout be designed to work as a corner-plotted plan as well as an interior-plotted plan. As an interior-plotted plan, the garage is accessed from the front yard of the home; as a corner-lot plotted home, the driveway is configured to access the garage from the side yard. The floor plan does not change, but rather the driveway access does.
- **Three-car, Street-facing Garages** - When a plan includes a three (3) car garage in this configuration, the third car bay should be offset five feet (5’). Additionally, furr-out (extend out) garage face wall at all three bays at least 12”. Three (3) individual garage door bays are preferred over two (2). The length of the front garage wall face should not exceed 50% of the entire front facade of the home.
- **Typical Rear-loaded Garage Configuration** - This treatment completely de-emphasizes the garage by placing it in a rear lane. The streetscene features forward facing architecture.
- **Staggered Recessed Garages (Typical Shared Easement Plotting)** - The “two-pack” plotting concept staggering garages in twos. One is forward and the second is back, in a deeper recessed position. Only one (1) garage is visible along the streetscene, and building massing is varied.
Garages can be further de-emphasized by using one or more of the following techniques:

- **Garage Wall-Plane Furr-out** - "Furr-out" (extend out) the garage wall plane 8” to 12” for front loaded street-facing garages when the garage door is at the minimum setback. With other garage configurations, a range of 6” to 8” is recommended.
- **Screened Garage Door Elements** - Install devices such as attached trellises beneath garage roof fascias and above garage door header trims, or build detached trellises in front of the garage, spanning the driveway.
- **Porte-Cochère** - A porte-cochère is encouraged with a recessed garage plan because it creates an additional screened parking space and an occasional outdoor private space.
- **Three-car Garage Treatment** - No street-facing, three (3) car garages will be allowed without additional garage treatments.
- **Garage Plotting Offsets** - When houses are "reverse-plotted" (garages on two lots with a common property line and the garages are directly adjacent to each other) provide an additional two (2’) offset.

### 6.4.8 Landscaping

The following landscape guidelines address individual lot preparation to ensure that regardless of individual homeowner preferences, the residential lot appearance and function will fit into the total design framework at Rio d’ Oro.

Each individual homeowner plays a vital role in implementing the aesthetic and sustainable features of the Rio d’ Oro development. Lot owners who wish to add landscape architectural elements to their gardens should follow specific standards for building materials and finishes selected to emulate the natural environment and complement the residential architecture. The landscape architectural elements designated for private garden improvements that are visible from public areas are the focus of these guidelines. Garden design elements such as walls, fences, arbors, and paving should contribute to this design intent. Front yard garden design applicable for single-family detached homes are subject to the following criteria.
Grading
Residence lot grading should create sheet flows over a broad area, as opposed to concentrating storm drain flows and creating the potential for erosion. Roof downspouts must tie into the lot drainage system. Surface drainage swales may be used on a limited basis. Where possible, create drainage swales and bio-swales to collect and filter the surface run-off from irrigation or natural precipitation. Bio-swales require careful design to function correctly. In no case should swales be allowed to drain off the rear slopes of lots, down the native or engineered slopes. On-lot grading that may impact the engineered slopes or native slopes adjacent to the developable envelope [pad] and/or house foundation, shall be reviewed by a registered Geotechnical Engineer.

Plantings
Street tree planting will occur within the front yard setback and be integrated into the front landscape design. Each interior lot is required to have one street tree. Each end lot is required to have a minimum of three street trees. Street trees planted within the parkway strip are in addition to this requirement for those streets that have primary and secondary street tree designations. Public Facility Easement (PFE) areas between the street curb and residence lots should be developed to blend in with the overall front yard landscape plan. The intention is to encourage a harmonious front garden design treatment between the back of curb/walk and the front of the home. Required street trees must be installed and maintained in good health by the homeowner.

The ground plane is to be predominately ground cover and shrubs. A maximum of 25% of the front yard setback area may be planted in lawn. The minimum width for lawn areas is 8 feet. Lawn substitutes that use less water are encouraged. Potential homeowners can refer to the recommended plant palette in Appendix C to enhance the beauty of residential gardens, while keeping within the overall design theme of Rio d’ Oro. Landscaped areas of front yards should be zoned to correspond to hydrozones and solar orientation. Planting should be designed to screen the side and back yard areas from public streets and adjacent lots and to complement the overall lot garden design.

GREEN CONCEPT
Use native, drought tolerant, and non-invasive plant species within residential landscaping palettes.

GREEN CONCEPT
Minimize turf areas to reduce the demand for irrigation.
Exhibit 6-4: Typical Single Family Front Yard Landscaping
**GREEN CONCEPT**

Provide shade for windows in the summer and solar exposure in the winter through the use of deciduous trees.

**GREEN CONCEPT**

Provide shade for hardscape areas to reduce “heat island” effect.

Each planted portion of the front yard should have an automatic irrigation system installed and maintained by the homeowner. Water conservation design criteria should be followed in residential gardens in order to minimize water use for landscape purposes. See Chapter 8: Public Facilities for additional details regarding Irrigation system designs.

**Hardscapes**

All paving materials and forms for walks and entry courtyards should complement the architectural materials and forms of the home. Up to a maximum of 20 feet of curb frontage on each lot can be installed as a paved surface. This surface is to be primarily used for the driveway and/or entry walk, and must match the predominant on-site paving material such as brick, stone, cast stone, or textured/scored concrete. Pervious paving is encouraged. Asphalt driveways and entry walks are not permitted.

**GREEN CONCEPT**

Minimize impervious surfaces to reduce stormwater run-off and promote groundwater recharge.

**GREEN CONCEPT**

Choose paving light color paving surfaces to reduce the “heat island” effect.
Fencing

Fencing is anticipated at Rio d’ Oro in order to establish privacy for individual homes. Each single-family detached lot shall have a wood privacy fence that will be installed by the home builder at time of occupancy. Wood fences should be constructed with lumber which has been certified as sustainable by the Forest Stewardship Council. Homes abutting parks, paseos, open space areas, streets or other public spaces shall be required to provide fencing or walls consistent with those described in the Community Design Chapter. Homeowners will be responsible for maintaining the quality and appearance of fences.

The design of lot fences should be visually integrated with the home architecture as well as the surrounding landscape elements. In general, fences should occur on property lines except for swimming pool enclosures, side yard access fences, and where large lots or natural conditions dictate otherwise. Lot fencing should be a “good neighbor” design, with both sides of the fence having equal, well designed, and constructed elements. Both types of privacy fencing are depicted in Exhibit 6-5: Typical Private Yard Fencing.

The side yard is defined as the space between the side of the house and side property line. Side yard privacy fencing can extend from the side yard access fence, along the side yard to the back lot corners. The standard height for this fence shall be 6 feet. This fence is to be constructed in conjunction with the residential building.

Side yard access fences [facing parallel to the street] and connecting houses to side yard fencing should have a lattice accent within the top 18 inches of fence height. Should the corner of this fence be visible from the street, the end should return along the side yard a minimum of 24 inches toward the back yard.

If a retaining wall is needed at the base of a lot fence, the retaining walls should be planted at the base so that wall mass is overgrown by vegetation. Vine-covered open space fencing is encouraged. Raised cast concrete or masonry planters planted with vegetation are acceptable.

Pool enclosure fencing should consist of tubular steel or mesh and must use picket spacing or wire mesh openings with a maximum opening of less than 4 inches. Other requirements may apply.

Any proposed lot walls or fences or combination thereof must conform to the following height restrictions:
- Garden wall (a decorative wall or screen that provides privacy at an outdoor room, not retaining, not attached to house) - 6'-0" maximum.
- Pool enclosure fences or walls - 5'-0" minimum per the Butte County General Code (or current Health and Safety Code) to 6'-0" maximum.
- Side and rear yard fencing (privacy, open wire, wood, or metal) - 6'-0" in height.
- Custom front yard walls or fences which are attached to, and designed as an extension of the house, the length of which shall be no more than 1/3 of the house frontage and shall extend to both side yards. These walls or fences shall be a maximum of 6'-0" in height and shall express the architectural style of the home.

Unacceptable wall and fence materials include metal siding, chain link, vinyl siding, and plain concrete block. Wood fencing with components smaller than two inches in width or thickness shall not be used on lots that abut open space.

GREEN CONCEPT

Use recycled, local and/or readily renewable materials for the construction of fences and walls within private yards.

Exhibit 6-5: Typical Private Yard Fencing
6.4.9 Special Design Criteria for Cluster Homes

The following additional criteria regarding Plotting, Massing, Plans and Styles and Garages, is required specifically for the following building plan types:

Auto Court Clusters

- Project a front door image and access to the street front for outside units and to the auto court for inside units.
- Provide porches or balconies at front, side, or rear where style appropriate and when possible for stepped massing.
- Vary setbacks on the building.
- Vary roof pitches and directions.
- Recess garage doors a minimum of six (6") inches from face of garage.
- Plans and Styles—Provide at least two (2) different elevations per building.
- Provide one (1) or more styles per building cluster.
- Vary plans, placing garages at different locations relative to the auto court. Avoid a straight lineup of garage doors adjacent to one another.
- Provide a variety of garage treatments within the auto court to distinguish each unit's garage.

Green Court Cluster

- Project a front door image and access to the green court space.
- Provide enhanced street-side elevations and architectural designs for the homes abutting the public street to avoid blank walls along the public streetscape.
- Consider corner-oriented entries for units abutting the public street.
- Provide landscape and monument features at green court entries.
- Place garage access at rear lanes.
- Provide porches or covered entries for stepped massing and transition to common spaces.
- Vary setback of the buildings along the green court.
- Vary roof pitches and directions in the context of their relationship to the green court and the lane to provide massing variation.
- Provide building articulation along rear lanes by recessing or cantilevering second stories.
- Consider recessed garage doors along rear lanes to provide additional articulation.
- Provide opportunities for landscaping along lanes to soften architecture.
- Provide two (2) or more styles per building for each cluster.
6.5 Attached Multi-Family Homes

Multi-family home builder parcels are much like small villages or communities. Each parcel must be designed for compatibility within itself, using a blend of building types, compatible architectural styles, and a tastefully balanced palette of colors and materials to achieve a restful uniformity within each parcel. Therefore, multi-family buildings require a unique set of guidelines. A variety of for sale and rental housing types can be provided within the Attached and Multi-Family product array.

- Duplex - two units that share a common wall. Duplexes can be for sale or for rent. They can be provided on one lot with single ownership, on one common lot with subdivided air space (condominium), or they can be located on individual lots for individual ownership (fee simple).
- Triplex - three units that share a common wall. Ownership and subdivision are similar to duplexes.
- Town homes - 4 or more units that typically consist of two or more floors. Town homes are typically for sale but can also be for rent. Town homes can be either fee simple or condominium units depending upon the design of the unit.
- Flats - 4 or more units that typically consist of one floor. Flats can be for sale or for rent (apartments). Flats are usually provided on one lot with single ownership (apartments) or on one common lot with subdivided air space (condominium).

6.5.1 Site Planning

Site planning for the following general concepts should be considered when planning for and designing attached and multi-family housing.

- Emphasize pedestrian access and connections to public sidewalks, trails, and open space systems when preparing site plans.
- Keep parking internal to the project and not along streets, except for guest parking.
- Solid walls/fences at the project periphery are to be set back five (5') feet or more behind the front facade, and are to be minimized as much as possible. They are to be used only for sound attenuation, privacy, or security.
- Each multi-family project within Rio d’ Oro shall be required to provide at least one major community amenity to serve as a focal point for that community. This amenity may be a playground, a community building, a pool, a sport court, or a playfield.

**GREEN CONCEPT**

Provide public spaces that promote walking and socializing.

**GREEN CONCEPT**

Orient buildings to maximize solar exposure for passive cooling and heating.
6.5.2 Building Plans and Style Selection

Similar to single family neighborhoods, multi-family neighborhoods require diversity in architecture to create interesting and attractive streetscenes. To this end, each multi-family neighborhood shall provide the following:

- At least two (2) different elevation styles for projects containing three or more of the same building type.
- A minimum of two (2) individual unit plans per building.

6.5.3 Building Massing and Form

Attached and multi-family buildings should achieve a varied building mass through varied articulation, massing, and creative floorplan arrangement. The following criteria should be followed to the greatest extent possible:

- Minimize blank, singular planes oriented toward public views. Provide some architectural elements on all sides of the building.
- Consider intended architectural styles in conjunction with the development of building plans, massing forms, elements, details, and color.
- Design buildings to define outdoor spaces, with floor plans that have a logical and functional relationship between indoor and outdoor spaces.
- Provide front porches where style-appropriate and when possible for stepped massing.
- Vary setbacks on building elements/façades.
- Vary roof pitches and directions.

**GREEN CONCEPT**

Design multi-family buildings on a 24-inch module to utilize lumber more effectively and reduce construction waste.
6.5.4 Roofs

Roofs should consist of a variety of appropriate roof forms including hip and gable roofs. Roof pitch should be appropriate to style and should be at least 5:12 to maximize solar exposure. Roofing materials should consist of composite shingle or flat concrete tiles to ensure long-term durability and reduce the risk of fire. Materials should be consistent with the architectural style of the home.

Roof colors should be light to medium to reduce heat gain and maintain a comfortable indoor air temperature. Roofing materials should have a Solar Reflectance Index (SRI) of 29 or greater.

**GREEN CONCEPT**

Maintain light color rooftops with a high solar reflectance to reduce the creation of heat islands and to maintain comfortable indoor air temperatures, thus reducing the use of energy for heating and cooling.

**GREEN CONCEPT**

Use durable roofing materials to reduce the need for replacement and reduce waste.

**GREEN CONCEPT**

Design roofs to maximize solar exposure for the potential installation of solar panels or photovoltaics.

6.5.5 Entries

Multi-family buildings should establish a “street friendly” front door image and direct access to the street front. Building entries should be designed and sited with a strong physical relationship to public areas and streets. Entries must create a positive initial impression, locate and frame the doorway, act as an interface between public and private spaces, and further identify individual unit entries. Wherever possible, site plans should orient the front door and provide access toward the public street or entry courtyard.

If front entry location is not immediately obvious due to the building configuration, direct and draw the observer to it with added lighting and landscape elements. Incorporate appropriate roof elements, columns, feature windows and/or architectural forms in the entry statement to emphasize the building character and the location of individual doorways.
6.5.6 Windows

Typically the location of windows is determined by the practical considerations of room layout, furniture placement, views, and privacy. Design emphasis here should be of particular concern as windows play an important role in the exterior architectural character of multi-family buildings and can contribute to energy efficiency when strategically located.

- Within the appropriate style requirements, group and coordinate windows with other design elements to create a composition and sense of order.
- Where appropriate to style and window form, the use of multi-paned windows is encouraged.
- Use appropriate scale and proportion typical of the style in window design to strengthen the elevation style.

Windows should be designed and placed in relationship to eaves, overhangs, and trees so that solar exposure is maximized in winter and minimized in summer.

Recessed windows, if provided, are encouraged to be a minimum depth to achieve a cast shadow that is proportional to the window, consistent with the architectural style. Functional shading devices are another option for providing passive solar heating and cooling and should be consistent to the architectural style.

**GREEN CONCEPT**

Design and locate windows and associated design features to provide passive cooling and heating of interior spaces.

Windows should be energy efficient to ensure comfortable indoor temperatures during all seasons and minimize the need for mechanical heating and cooling. Energy efficient windows are dual paneled with a low U-factor. A low Solar Heat Gain Coefficient (SHGC) is preferred for all windows except possibly for those windows on the north side of the building, where solar heat gain may be desired. Window frames should be constructed with materials that have low-conductivity such as vinyl or vinyl-wrapped frames. Metal window frames are prohibited.

**GREEN CONCEPT**

Install energy efficient windows on all multi-family buildings.
6.5.7 Balconies

The inclusion of balconies is encouraged for both aesthetic and practical purposes. They are useful in breaking up large wall planes, offsetting floors, creating visual interest, and adding human scale to the building. They provide outdoor living areas and elevated open space.

- Balconies may be covered or open. They may be either recessed into the mass of the building or serve as a projecting element, and must meet fire code requirements.
- Design balconies as an integral element of the building with details, eaves, supports, and railings in keeping with the architectural style and other elements of the building's design.
- Avoid designing plans with balconies that occur side by side or are not accessible.
- Wooden balconies which occur at the wildland fire interface must meet the applicable requirements of the fire department.

6.5.8 Garages

Where attached or detached garages are included in multi-family projects, the intent is to tie these facilities into the overall project design while reducing their visual emphasis. To achieve this, these structures must incorporate the following:

- Utilize the same architectural style, massing elements, wall materials and finish, design details and colors as the residential dwelling units.
- Utilize similar or compatible roof forms.
- End wall conditions that are visually prominent from the street should receive special architectural attention.
- The relationship of the garage face to the building may be projecting, flush or recessed, provided that it is compatible with the mass and style of the building.
- Provide sectional garage doors with automatic door openers. Garage door windows are encouraged, but not required.

6.5.9 Carports

Carport structures must be compatible with the style, color, and materials of the primary buildings. The number of continuous carport parking spaces cannot exceed ten without inclusion of a landscaped planter or break in the carport structure. Landscape islands and sidewalks must be provided between parking spaces or carports to avoid continuous, uninterrupted paving. These structures also provide an ideal opportunity for the integration of photovoltaic panels if located properly.
6.5.10 Parking

In the case of multi-family buildings adjacent to primary streets, the focus of the multi-family buildings should be their street front image and pedestrian access. Each project will incorporate interior oriented parking solutions and use the following design techniques to enhance the architecture of the streetscene:

- Where parking areas are visible from public streets, these areas should be screened from view with landscape or architectural solutions.
- Distribute resident parking on-site to provide close proximity to individual units.
- Group unassigned or guest parking in evenly distributed locations.

**GREEN CONCEPT**

Design and distribute parking within multi-family neighborhoods to reduce expansive paved areas and provide shade of paved parking areas to reduce the “heat island” effect.

6.5.11 Trash Enclosures

Enclosures must be provided to accommodate the numbers and types of trash containers as required by the disposal company. These enclosures must be positioned in a centrally convenient area for residents. Minimize the impact on adjacent residences and other developments by keeping enclosures away from the edges of the community and highly visible locations. Other design considerations include:

- Trash enclosures for all multi-family projects must be compatible with the overall design character of the project, be easily accessible, and provide adequate space for all trash and recyclable materials.
- Trash enclosures must be substantially constructed in style and wall finish that is consistent with the overall architectural character of the development.
- All trash enclosures must be equipped with complementary gates of durable construction, hinged to self-supporting steel posts and a steel trellis or other covered structure overhead.
- Lighted access is required at each enclosure.
- Trash enclosures shall be enclosed or covered where feasible.

**GREEN CONCEPT**

Provide conveniently located recycling facilities for multi-family communities to encourage recycling and reduce the amount of waste diverted to the landfill.
6.5.12 Lighting

Multi-family light fixtures should be designed to convey the architectural style of the building. Lighting fixtures should be chosen according to location and use of particular spaces to ensure adequate light and ensure energy efficiency. General lighting should include fixtures that provide a broad wash of light across all surfaces and spaces of the room while task lighting and accent lighting, such as canister lights and pendant lighting, should be limited to only illuminate specific spaces or surfaces as needed or desired.

Exterior lighting of multi-family buildings and common areas should be designed to reduce sky glow and limit light trespass onto neighboring properties. In lanes, wall mounted lighting is preferred to pole mounted lighting to save space and ensure light is directed only to those areas necessary.

- Where appropriate, use motion sensors, photo sensors, timers, and dimmers both indoors and outdoors.
- Ensure exterior fixture lumens are emitted straight down (90 degrees or higher from the lowest point.)
- Design exterior lighting to produce no more than 0.01 horizontal foot candles 10 feet beyond the edges of the multi-family community.
- Consider window placement of adjacent uses in the design and location of exterior light fixtures.
- Install fluorescent lighting in appropriate areas inside and outside the building, limiting incandescent lighting to specific areas.

**GREEN CONCEPT**

Design interior and exterior lighting of multi-family buildings to promote energy efficiency, reduce sky glow, and limit light trespass onto neighboring properties.
6.5.13 Community Recreation and Common Facilities

Each attached multi-family parcel within Village 4 must include common recreation facilities such as pools, spas, clubhouses, management offices, barbecues, and other appropriate facilities.

- Common recreation facilities must be key character elements.
- All architectural and community elements, such as street furnishings, benches, lighting standards and trash receptacles, must be consistent with the overall architectural character for the neighborhood.
- Clubhouse and other common buildings should exhibit four sided architecture.
- Colors, massing, roof pitch and materials must be compatible with residential buildings or exemplify project themes.

6.5.14 Landscape Design

Multi-family attached residential buildings should be arranged to optimize views from the street and pedestrian connections to adjacent neighborhoods and the arroyo greenway:

- Parking should be screened from public areas and the use of structured or covered parking is encouraged.
- Common walkways and trails should be linked to the Arroyo Trail.
- Pedestrian circulation should be clearly articulated into a hierarchy of private entries and public common walks. Common walks should connect neighborhood recreation and gathering places with public sidewalks and trails.
- Primary pedestrian circulation routes should be accessible and in accordance with current American with Disabilities Act (ADA) requirements.
- Each attached residential village should have its own Neighborhood Green or common area with appropriate recreation amenities. Links to adjacent village parks, linear open spaces, and the arroyo greenway should be identified in preliminary design phases.

Landscape and garden design elements should reflect the unique character of each village housing product and site plan.

- Each village should utilize a unique plant, paving and furnishings palette.
- Site furnishings and pedestrian scale lighting should be unique to each village in terms of at least color.
- Gathering places shall be clearly discerned through the use of accent paving, clustering of site furnishings, and spatial articulation.
- Visible site walls required for building placement or ADA accessibility should utilize an enhanced finish such as stone veneer. The stone may vary according to village.
Exhibit 6-6: Typical Attached Common Area Landscaping
Sustainable site design and landscape features that conserve resources should be integrated into multi-family open space areas.

- Terraced gardens should be used to minimize runoff and increase water infiltration on building parcels with significant topography.
- Utilize bio-swales to collect and filter storm runoff. See Appendix C, Plant Palette H for bio-swale plant palette.
- Utilize pervious paving systems for parking lots and common pedestrian paved areas. Modular concrete paving systems specifically designed to collect and disperse storm and maintenance runoff are preferred.
- Look for opportunities to install solar panels on shade structures or buildings to offset electrical demand for operating landscape and common area lighting and equipment.

High quality materials for landscape paving and structures should be utilized throughout the project:

- Acceptable paving materials and styles for entries, parking areas, courtyards and any other garden paving that is visible from a public street or common area include the following: natural stone, ornamental cast stone, brick, turf-block, interlocking concrete pavers, multi-finish concrete with integral color.
- Large paved areas are to be avoided; parking lots should be smaller and dispersed with substantial shade tree planting integrated into the parking pattern.
- Wood decks are suitable as an outdoor gathering area, but are to be detailed, finished, and stained to complement the architecture. Recycled decking materials are encouraged.
- All wood decks shall have a skirt to ground level. Skirt material shall be non-combustible material or wood coated to render it non-combustible. Fire-resistant and fireproof decking is encouraged.
- Construction materials and styles to be discouraged: large areas of untextured, unbanded, unscored and/or uncolored concrete, unfinished exposed concrete block, unfinished naturally weathering wood decks visible from public spaces or a neighboring lot, engineered decks higher than 5 feet from finish grade with only a lattice screening the under deck structure, synthetic materials such as corrugated fiberglass or aluminum, false stone, or false brick.

**GREEN CONCEPT** Minimize paved areas and choose highly reflective paving materials to reduce the “heat island” effect.
The recommended ornamental and native plant materials and practices contained throughout these Guidelines have been selected because of their specific characteristics that complement the microclimates, soils, and aesthetic conditions of the site. The plant palettes offer a wide range of suitable choices for a variety of landscape needs. See Appendix C, Plant Palette I for the Attached Residential Plant Palette.

- Rio d’ Oro is located in the thermal belts of the California Central Valley, defined as Zone 9 in the Sunset Western Garden Book. Land areas in Zone 9 are higher in elevation than the Central Valley floor. This zone benefits from the moderating effect of colder air flowing to lower elevations during the winter. Zone 8 is the neighboring zone to the west and south, placing Rio d’ Oro in one of the more suitable climates for growing citrus. Zones 8 and 9 are very similar, otherwise, with high summer daytime temperatures, with almost constant sunshine during a long growing season. Winter temperatures are just adequate enough to reach dormancy requirements for fruit trees.

- Much of the approved plant material has low water demand and falls under the Sunset Western Garden Book’s classification for drought tolerant plant material.

- Native species found to be growing in the arroyo should be used in the private gardens.

- It is advantageous to incorporate many compatible species of trees, shrubs, and ground covers in the garden. A diversity of plants creates more visual interest, lowers chances of pest infestation, and introduces or attracts more animal and insect diversity.

- Planting designs should preserve view corridors to the arroyo, consider the views of neighbors, and enhance community appearance. Trees and shrubs should be selected to fit specific locations, keeping in mind the eventual size in relation to the architecture and spatial characteristics of the mature landscape composition.

- Walls and fences should be softened by the use of shrubs, vines, and espaliers. Plant material and architectural elements should be complementary.

- The use of indigenous or native plant material is encouraged for tree, shrub and ground cover plantings, particularly in common public open spaces and where there is a transition from village landscapes to natural areas.

- Plant materials with similar soil, moisture, and sun access requirements should be grouped together. This grouping is defined as a hydrozone. Plants with similar water needs should be irrigated at the same rates.

- Native plants require less irrigation or fertilization than ornamentals and reinforce the natural character of the site.

- A minimum of twenty (20%) percent of the lot plant list should include native or drought-tolerant species. A majority of the plant list for any given attached residential village landscape should be low water demanding and should meet the water budgets established for each village. As Tentative Maps for each Map are prepared, water budgets shall be calculated according to the requirements of AB 1821.
6.5.15 Fences
Fencing in higher density residential villages is optional where several dwelling units are contained within one building, shall be designed to the following standards:

- Decorative patio walls associated with ground floor units shall be stucco, stone veneer with tubular steel to allow transparency, or high-quality wood construction and designed as an extension of the architecture. Height shall be 6 feet.
- Perimeter fencing shall be painted steel or a combination of the above wall element with steel, and the design shall be expressive of the architecture. Maximum height shall be 6 feet.
- All fencing shall comply with the fencing guidelines provided in the Community Design Chapter.

6.6 Additional Residential Green Building Guidelines
The following section provides additional green building measures that may be applied to both single family and multi-family buildings throughout the Specific Plan Area. These building practices will reduce water use, exceed energy efficiency standards, minimize the use of construction materials, minimize construction waste diverted to the landfill, and improve indoor air quality. Additional or supplementary green building practices are also encouraged to be implemented in order to achieve these goals.

Reduce Water Use
Residential development within Rio d’ Oro shall reduce the generation of waste water and the demand for potable water by installing high efficiency water conserving fixtures such as toilets, shower heads and faucets.

Energy and Water Efficiency
Rio d’ Oro commercial development shall employ design techniques and building materials that reduce the use of energy for the life of the project. The intent is to reduce the project’s carbon footprint and minimize the project’s contribution to global warming. The following list provides a variety of options that may be implemented to achieve this goal:

- Installing and calibrating HVAC, lighting, domestic hot water, and other energy related system to maximize energy performance.
- Installing high efficiency HVAC, water heaters, washers, dryers, stoves, refrigerators, lighting and other appliances.
- Restricting HVAC systems that use CFC-based refrigerants.
- Selecting refrigerants and HVAC systems that minimize or eliminate ozone depleting compound emissions.
- Maintaining and monitoring HVAC and other equipment to prevent refrigerant leakage.
- Providing thermal mass floors and walls or hydronic radiant heating systems in floors and walls.
- Tightly sealing building envelopes to ensure maximum energy efficiency while still allowing for proper ventilation.
- Installing photovoltaic (Solar) panels or film to reduce demand for energy.
- Installing solar water heating systems or on-demand water heating systems to reduce the demand for energy.

Residential projects within Rio d’ Oro are not required to implement all of the aforementioned methods. The methods chosen to achieve energy efficiency should be chosen on a case by case basis based upon the cost, effectiveness, and practicality of each in relationship to the project.

Reduce Materials and Waste

The use of construction materials shall be reduced by using some or all of the following design methods:

- Using fly-ash in concrete foundations (30% or higher).
- Using engineered or FSC-Certified lumber.
- Using reclaimed wood or other recycled building materials.
- Designing on 24-inch modules to reduce waste.
- Using rapidly renewable construction materials such as bamboo, cotton insulation, agrifiber, linoleum, wheatboard, strawboard, cork or comparable materials.

In addition, the use of high quality, durable materials are required so that these materials will not have to be replaced as frequently, reducing the amount of waste diverted to local landfills.

Construction waste shall be reduced by establishing a construction waste management plan for all new residential construction. This plan shall consider the recycling of cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum board, carpet, and insulation. Recycling areas shall be designated on each construction site to accommodate segregated or commingled construction waste. Recycling efforts shall be tracked and documented throughout each phase of construction for each commercial area.
Indoor Air Quality

Improved indoor air quality ensures that new homes in Rio d’ Oro will provide a healthy and enjoyable atmosphere for residents. Some or all of the following building techniques should be implemented to contribute to improved indoor air quality:

- Installing ventilation systems that are designed to meet or exceed the minimum outdoor air ventilation rates described by ASHRAE standards.
- Installing carbon dioxide and carbon monoxide sensors and/or alarms.
- Installing air flow sensors that inform the HVAC system to correct air-flows.
- Performing building flush-outs prior to occupancy of commercial buildings or testing air to ensure contaminates are no longer inside the building.
- Reducing the amount of indoor contaminants by using low VOC and formaldehyde free adhesives, paints, plastics, coating, primers and other building materials.
- Installing grills, grates, or other entryway systems to prevent contaminants from entering the building.