

# MARIPOSA

NEW MEXICO

## Guidelines for Sustainability

Neighborhood  
Builder  
Homes

*A High Desert Community  
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NEW MEXICO

*A High Desert Community*

When complete, Mariposa may be home to 18,000 or more residents. Mariposa will be, in the truest sense of the word, a community – one that contributes to the character of the surrounding region. However, it takes more than good architecture to make a community work and thrive. It takes good governance and foresight about how people live, work, and gather together. It takes an awareness of our impact on the environment, an understanding of the importance of resource conservation and a deep concern for the natural world.

Overlooking Rio Rancho, and the neighboring communities of Bernalillo and Albuquerque, the views from Mariposa encompass both the lights and energy of these urban centers and the natural wonders of Central New Mexico. Breathtaking panoramic views of the Jemez and Rio Grande Valleys, Mount Taylor, Jemez, Sangre de Cristo and Sandia Mountains are available from the community. The wonder of these unspoiled vistas is matched by the dramatic landscape within the community. Soft, rolling grasslands dotted with piñon and juniper contrast with a spectacular escarpment that cuts through the center of the community, affording awe-inspiring views of the remarkable high desert landscape below and beyond.

The underlying difference between Mariposa and other community developments is an understanding of the importance of the land. The stark beauty of the property may be one of the greatest draws to living at Mariposa. Development at Mariposa must be respectful of the land, have an appreciation of the high desert landscape and a willingness to preserve and conserve the natural resources that give the site such value. Through land preservation and restoration, green building standards, water conservation and reuse, wildlife and plant habitat enhancement, and a comprehensive system of governance to ensure the successful implementation of these components, residents of Mariposa will be able to enjoy the natural wonders of Mariposa for generations.

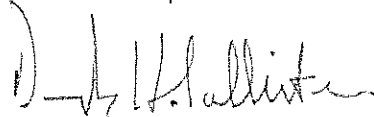
As stewards of this special land we are committed to the vision of a community conceived, designed and built to preserve nature's intricate balance. Careful stewardship will guide the planning, development and continued existence of Mariposa. Stewardship begins with the owner of the land, High Desert Investment Corporation, and our vision and commitment to making the best of the land – environmentally, socially and economically.

High Desert, as the Master Developer, and each individual builder/developer and owner will become a "partner" and important representative of Mariposa in our quest to achieve the vision for our community. These Guidelines for Sustainability will help ensure that all builders/developers and owners will be responsible for helping achieve the vision.

Our goal – an integrated and sustainable community that honors its New Mexican roots and natural habitats while providing a place that will endure.

We encourage you to fully read these guidelines, ask questions, adhere to the requirements and thoughtfully consider the recommendations, as you also become a steward of this special place.

Welcome to Mariposa New Mexico.



Douglas H. Collister  
President

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Douglas H. Collister  
President





## INTRODUCTION TO MARIPOSA

*A resource as precious as the land which comprises Mariposa demands utmost sensitivity. Years of exacting analysis, planning, design and exhaustive review were applied to determine the feasibility of integrating an active community within this delicate desert ecosystem.*

*The mandate set for Mariposa is to achieve "sustainable development." Sustainable development is a concept defined by the United Nations Commission of the Environment as achieving stability for both physical and social systems by meeting the needs of current generations without compromising the ability of future generations to fulfill their needs.*

*At Mariposa sustainability means design and construction in ways that are intended to preserve the resources, ecosystem and natural beauty of the property. Development will respect nature. A large percentage of the land will remain untouched in order that the rich habitats for plants and animals may continue to thrive. The arroyos will remain in their natural state with only the vegetation enhanced to increase the wildlife habitat.*

*Conservation systems are designed to yield improved quality of life and sustainability. Water harvesting and conservation goals will contribute to a continuing and plentiful supply of quality water. The application of design shall strive to enhance the visual and air quality at Mariposa through sensitive siting of homes and buildings, landscaping, use of lighting and construction standards. In addition, an extensive network of trails and pedestrian connections are planned to encourage fewer automobile trips within the community.*

## **PRESERVING THE VISION**

*The prescription for designing and building a community which will truly be sustainable are set forth in these Guidelines. The criteria are provided as a starting point for the builder, homeowner and High Desert to collaborate in preserving the vision for this remarkable community. Our goal is to make Mariposa one of the most desirable places to live in the Southwest — a community that balances the needs of the homeowner with a concern for the future of environment.*

## **ROLE OF THE FOUNDER**

*The Founder, pursuant to the Declaration of Covenants, Conditions, and Restrictions, will review all applications for new construction at Mariposa and to administer these Guidelines for Sustainability for Neighborhood Builder Homes ("Guidelines"). Each proposed development site plan, building design and landscape design will be evaluated for appropriateness and compliance with the objectives of these Guidelines. The Founder will review and approve all plans and applications for development and new construction at Mariposa by developers, professional builders and production homebuilders in accordance with these Guidelines.*

*After construction has been completed, the Founder, in accordance with these Guidelines, will administer any proposed modifications or additions to builder homes.*

## **HOW TO USE THESE GUIDELINES**

*This document is structured for easy review and reference. It begins by introducing the design objectives for Mariposa and describes the approach to site planning, architecture, landscaping and sustainable living. It defines the steps for review and approval of projects and homes within Mariposa and presents the procedures to be followed during construction. All properties in Mariposa are also governed by the Community Charter for Mariposa Residential Properties (the "Charter), the Bylaws of the Mariposa Community Association Inc. and the Articles of Incorporation of the Mariposa Community Association,, Inc. (the "Articles of Incorporation"). The owners, builders and developers are responsible for any*

*restrictions and requirements listed in any recorded Supplemental Declarations or Guidelines for their property.*

#### **MARIPOSA GUIDELINES FOR SUSTAINABILITY – NEIGHBORHOOD BUILDER HOMES**

*These Guidelines are separated into various sections for convenience. However, they should be read completely to fully comprehend the intent. The Guidelines are divided into the following sections:*

*Site Planning*

*Landscape*

*Architecture*

*Sustainable Living*

*Residential Wiring*

*Procedures for Plan Review*

*Construction Regulations*



## **SITE PLANNING**

*Site Planning at Mariposa is the melding of a number of design and land planning principles, which will allow the vision for this exceptional community to become a reality. Commitment to conservation, preservation and the enhancement of the natural environment is balanced with sensitivity to the economy and efficiency of contemporary building and construction.*

## **SITE PLANNING PHILOSOPHY**

Mariposa consists predominantly of high desert pinon-juniper, and interspersed grassland and sagebrush habitat. Water is scarce, with an annual precipitation of approximately 8", and under story vegetation is limited. Development in this environment must be carefully sited, with considerations of existing conditions, scale, architectural detail and orientation taking precedence in the planning and design process.

The Site Planning section of the guidelines, require careful consideration of the integration of buildings with their surroundings so as to minimize intrusion and impact on the environment. This section will introduce concepts to enhance energy efficiency, use storm-water runoff beneficially, minimize grading and site damage, preserve the night sky, preserve open space, preserve cultural resources and sites and respect for the environment.

## **CULTURAL SITES**

Mariposa lies in a region rich in human history, with occupation stretching back nearly 10,000 years and spanning the development and arrival of numerous peoples, cultures, and technology. When the Spanish conquistadors entered the region, they recognized the sophisticated cultural developments found in the large Pueblo villages, and in their narratives commented on extensive agricultural fields and food surpluses, geographically vast trade and information networks, and complex social and religious organization. The arrival of the Spanish in the northern Rio Grande sent the region into a new trajectory of cultural development that continues today.

All of Mariposa has been surveyed for cultural resources. Field scientists, walking transects across the entire site, conducted a full pedestrian survey of the area. Over the course of the Mariposa Survey, numerous archaeological sites were recorded. The majority of the Mariposa Survey sites are lithic scatters much like those documented by other surveys on northern Ceja Mesa. The occurrence and distribution of these sites has been used to help guide the establishment of open space and conservation areas within Mariposa. Agreements have been reached with the New Mexico State Historic Preservation Office and Army Corp of Engineers to allow development of Mariposa with the appropriate strategies to mitigate unavoidable impacts to cultural resources within the project area.

The land plan and platting for all of Mariposa have avoided or fully investigated known cultural sites, thus no additional cultural investigation should be necessary for any construction activity within a Neighborhood. However, if any cultural sites are found during construction you are required to immediately inform the Founder and discontinue construction in that specific area.

## **GRADING AND DRAINAGE**

### ***Requirements and Recommendations:***

- 1. Each Neighborhood will have a master grading and drainage plan that must be approved by the City of Rio Rancho and the Founder.**
- 2. Upon completion of construction of the grading/drainage infrastructure of the Neighborhood, the developer's engineer will certify what was constructed is in substantial conformance with the aforementioned approved master grading/drainage plan.**
- 3. The certified plan must be reviewed and accepted by the Founder.**
- 4. The finished pad elevation and drainage pattern of each lot within the Neighborhood will be established by the Engineer Certified and Founder Accepted plan.**
- 5. No changes to the finished pad elevation or drainage pattern of any lot is allowed.**

6. No weep holes or drainage pipes can be added to a completed wall unless a revised drainage and grading plan, prepared by a professional engineer, is submitted and approved by the Founder.

## **PARKING**

*Design Objective:* To allow each resident adequate parking while minimizing the impact of the parking areas.

*Requirements and Recommendations:*

1. Each lot shall contain an enclosed garage, either attached or detached from the home structure capable of parking two vehicles.
2. No exterior storage of recreational vehicles, trailers, boats or other recreational equipment will be permitted on any lot.
3. A minimum of two (2) additional parking spaces must be provided on the lot to accommodate guest parking, unless otherwise approved by the Founder. In some cases guest parking may be provided elsewhere within the Neighborhood as part of the neighborhood design. On-street parking shall not be counted in satisfying this requirement.

## **DRIVEWAYS**

*Design Objective:* To minimize the visual impact of the paved surface area and to harmonize with the home and streetscape.

*Requirements and Recommendations:*

1. Driveways should be located so as to minimize their visual impact
2. No driveway entrance shall be designed as a "drive under" using beams or arches spanning the driveway, unless designed and constructed as an integral part of the house or garage.
3. No driveway entrance features are allowed.
4. Driveway widths and surface area should be minimized.
5. Only one driveway will be permitted for each lot.
6. Unless required or specifically approved, driveways will not be allowed off of major streets.
7. Exposed aggregate concrete, colored concrete, flagstone, pavers, brick or gravel are all encouraged driveway-paving materials. Each developer shall select one type of driveway material to be used throughout the neighborhood. Materials may be combined if approved by Founder.
8. Colored concrete should reflect the warm rich desert hues, be low in reflectivity and compatible with the surrounding natural environment.
9. Uncolored concrete may be used with approval of the Founder.
10. Sharing and "grouping" of driveways is encouraged.

## **SITE WALLS**

*Design Objective:* The Southwest has a tradition of using walls to enclose outdoor spaces and to extend building masses and living areas into the landscape. Mariposa seeks to apply this tradition without creating the harsh maze typical of many suburban developments. Where possible, view walls, low walls, and "no walls" are preferred to promote an open and inviting residential community and help preserve all residents enjoyment of the natural environment.

Southwestern walls are typically constructed with considerable mass and thickness. View walls at Mariposa include open picket structures, which may appropriately be called fences but are structurally supported by pilasters with sufficient mass to create wall like appearance.

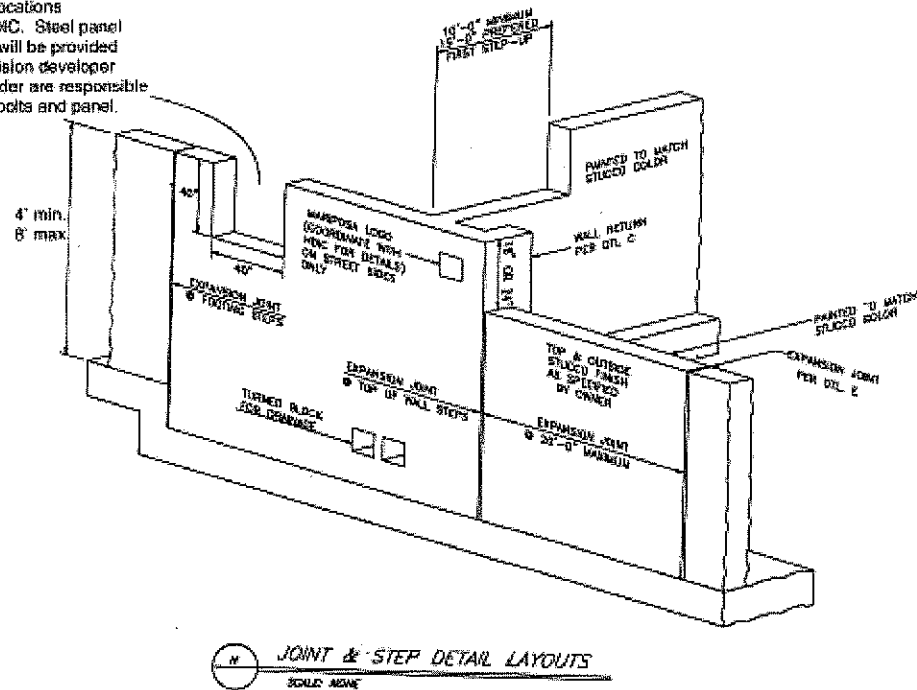
## Types of Walls

The walls shown here are designs, which will occur throughout the community. Any walls for builder homes should be influenced by the design characteristics of these walls.

### Definitions:

**Community Walls:** Community Walls shall conform to the standard design and specifications for Mariposa. Community Walls can be solid for privacy and screening or open to provide views to open space and other amenities.

Build 40"x40" opening for steel artwork panel at locations designated by HDIC. Steel panel and anchor bolts will be provided by HDIC. Subdivision developer and their wall builder are responsible for installation of bolts and panel.



### Definitions:

**Privacy/Party Walls:** Walls placed on or within the property to provide privacy and separation between homes and lots or to provide screening of less desirable views. Privacy/Party Walls enclose private space and may be attached to buildings. Party Walls are shared common walls.

**View Walls:** Walls, which provide security but allow views through to open space or other amenities.

**Retaining Walls:** Walls, which structurally create transitions between grade changes, integrate grade changes; integrate buildings with their site and which minimize the impact of grading.

### Requirements and Recommendations:

1. Community walls must be designed and built to the standard Mariposa specifications.
2. Community Walls cannot be modified after the original and accepted construction unless approved by the Founder.



3. Privacy and view walls should be designed to enhance the overall neighborhood theme, allow continuity in landscaping, and provide a visual amenity for the community. The exterior of Privacy Walls, where they face the street and are attached to the home must be of the same material and color as the home.
4. Party Walls must be the same color as the exterior of the Community Wall for the neighborhood. These walls may be either stucco or painted to match the Community Wall.
5. Consider using low walls and view walls to provide views from residences.
6. Privacy and Party Walls should be as low as possible with a maximum height of 8'-0" on interior of parcels without providing for terraced retaining walls.
7. Broken glass or other such material on top of walls is prohibited.
8. Privacy/Party Walls shall join Community Walls at the same top of wall elevation or lower.
9. Privacy or View Walls that are higher than Community Walls shall step down to the same top of wall elevation as community walls, at least 10 feet prior to point of connection, unless approved by Founder.
10. All exterior surfaces of Privacy or View Walls must be finished with a minimum of two coats of stucco or synthetic stucco, with medium sand finish on the public side. Privacy or View Walls may be detailed and finished to Community Wall standards or may be designed to be compatible with the building architecture. Only one design style will be allowed throughout a neighborhood.
11. No vertical additions or extensions will be allowed on top of any walls. No attachments are allowed, unless inset into the wall as a view wall and approved by the Founder.
12. All walls shall step, rather than slope, to accommodate grade changes.
13. To minimize wall lengths and open views to street landscape and open space, walls shall be stepped back at collector street corners and at corners adjacent to public open spaces.
14. Horizontal breaks, jogs, and variations in community wall heights are encouraged to minimize the monotonous corridor effect of long continuous walls along residential streets and open spaces.
15. Walls along both sides of walkways between residential lots shall match, be located and designed to make the walkway appear as open and spacious as possible. This can be accomplished by minimizing continuous wall lengths and through the use of view walls, low walls and railings along property lines, which do not require privacy.
16. Community Walls may be a maximum of eight (8) feet high and a minimum of four (4) feet on the exterior side of the wall, without terraced and landscaped retaining walls.
17. 40" x 40" openings in the Community Wall for artwork panel will be required as designated by High Desert Investment Corporation. The artwork panel and bolts will be supplied by H.D.I.C. and the neighborhood developer is responsible for installation.

## UTILITIES

*Design Objective:* To incorporate utility structures into the Neighborhood in a visually un-obstructive matter but allowing maximum efficiency of the service.

***Requirements and Recommendations:***

1. All electric service, telephone, fiber optic and cable shall be located underground, except at above ground connection points.
2. Electric meters, gas meters and all other utility connections to the home should be screened from sight to the extent utility companies will allow.
3. Whenever possible, the electric switch boxes should be placed on the opposite side of the street where the pedestrian access facilities, sidewalks, or trails are located.

4. In no instance shall switch boxes be located so that walkways must jog around them.
5. Where the placement of walls does not provide adequate space for the switch boxes, the walls shall be setback to provide the required clearances.
6. It is anticipated that all homes will have access to a fiber optic system, which has been designed on a community wide basis. All homes must comply with the wiring specifications for homes, which can be found in the Residential Structured Wiring Section of these Guidelines.
7. Fire hydrants shall be located in accordance with the City of Rio Rancho. It is not desirable for the fire hydrants to be located in the walkways or trails.
8. The roof-mounted appurtenances of the individual home should be screened from adjacent properties, streets and open space. Adjacent in this case means abutting. This includes skylights, coolers, and air conditioning units. Solar collectors, located on a flat roof must be located below the parapet. If on a pitched roof, must match the roof color.

## **WALKWAYS AND TRAILS**

*Design Objective:* Mariposa has created a community walkway and trail system that will connect Neighborhoods to each other, community facilities, public amenities, designated community open space and the Mariposa Preserve. Mariposa walkways and trails are intended to provide safe, functional, and aesthetically pleasing experience. These walkways and trails shall be provided within and between Neighborhoods as well as creating connections to allow all residents maximum pedestrian access throughout Mariposa.

### **Requirements and Recommendations:**

1. Developers of Neighborhoods are responsible for connection of walkways and trails within a neighborhood to the community walkway and trail system.
2. Where possible, walkways should be located and aligned to maximize views of surrounding natural features and community open space.
3. Curved walkways should be designed as sweeping curves that create visually appealing landscape forms. Abrupt and irregular curves and jogs should be avoided. Curved walkways should not be used in areas that are too narrow to allow a sweeping curve.
4. All walkways within the Neighborhood shall be a minimum of 4 feet wide.
5. All walkways must be designed, whenever possible, for handicapped accessibility. The design of wheelchair ramps at the street intersections should be in accordance with Founder approved specifications and comply with City or Rio Rancho requirements as well as the Americans with Disability Act. This does not apply to community trails.
6. Walkways and trail designs and colors must be approved by the Founder and will be used uniformly throughout the neighborhoods.

## **EXTERIOR LIGHTING STANDARDS**

### **Protecting Views of the Night Sky**

*Design Objective:* Views of evening sunsets, city lights, and the New Mexico night sky are among the most enjoyable features of living at Mariposa. Views can be ruined, however, by excessive light from streetlights and homes. In order to protect these valued views, Mariposa lighting standards focus on limiting the type and quantity of light from these sources. Careful attention to the selection of fixtures, which are shielded or filtered to minimize ambient light, is essential to preserving night views.

## **Types of Exterior Lighting**

### **Definitions:**

**Site Lighting:** Lighting mounted either on the ground on site walls or by other means for the purpose of providing safe passage around the improvements. Site lighting is also decorative accent lighting.

**Street Lighting:** Mariposa has specified a special street light for use in all neighborhoods within the community that minimizes light pollution.

**Building Mounted Lighting:** Lighting built into or attached to buildings on walls, ceiling, eaves, fascias or other locations for the purpose of providing general illumination, area illumination, security illumination or decorative illumination.

**Security Lighting:** Lighting intended to provide temporary bright general illumination of the area adjacent to a residence during emergency situations. Security lighting must be Fully Shielded (defined below) and directed downward on to the owners property. These fixtures must also be set motion sensitive only.

## **Shielding and Filtering Requirements**

Although proper shielding and filtering can dramatically reduce ambient light, care must also be taken in the selection of light sources.

### **Definitions:**

**Fully Shielded:** Outdoor light fixtures shielded or constructed so that no light rays are emitted by the installed fixture at angles above the horizontal plane as certified by photometric test report.

**Partially Shielded:** Outdoor light fixtures shielded or constructed so that no more than ten percent of the light rays are emitted from the installed fixture at angles above the horizontal plane as certified by photometric test report, may not exceed 40 watts.

**Filtered:** Light rays may be emitted directly from the light source in a Filtered Fixture, if the light source is no greater than 25 watts (or equivalent), is filtered through a frosted, seeded/beveled or semi-opaque lens/filter and/or is covered with material or design, which allows only limited light to be emitted.

### **Requirements and Recommendations:**

1. **Submission for approval of lighting plans should include the following information:**
  - a) **Locations, types of illuminating devices, fixtures, lamps, supports, reflectors and other devices must be shown on plans.**
  - b) **Description of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices and dimensions of the fixtures. The description may include, but is not limited to catalog "cut sheets" by manufactures and drawings.**
  - c) **Photometric data, such as that furnished by manufacturers, showing the angle of cut off or light emissions.**
2. **All exterior lighting must be located and oriented to minimize light encroachment onto adjacent properties, streets and open space.**
3. **An excessive number of fixtures, excess light levels, or glare will not be allowed. The number and location of all exterior light fixtures must be shown on plans reviewed and approved by the Founder. Specific fixtures and specifications must be submitted for review and approval prior to installation.**
4. **Exterior fixtures mounted on buildings shall be no higher than the line of the first story eave or, where no eave exists, no higher than 12 feet above finished grade, and shall be, Fully Shielded,**

Partially Shielded or Recessed in ceilings or overhangs, unless approved by Founder or required by the City of Rio Rancho. This requirement also applies to lighting decks.

5. Only incandescent lamps with a maximum 40-watt total will be allowed unless otherwise approved by the Founder.
6. Up-lighting is not allowed unless shielded by a roof or eave.
7. If filtered light fixtures are proposed, the glass must be opaque or frosted in order to obscure the light source. Wattage will be limited to a maximum of a 25-watt total per fixture and the Founder may require lower wattage.
8. Security Lighting must be angled downward so that the light source is not visible from other properties or the street.
9. Circuiting and controls for Security Lighting must only be activated by heat or movement, so they are not continuous. Security Lighting may not be operated or used as general lighting.
10. Only one exterior light fixture is allowed per car bay on a garage.
11. Seasonal religious and holiday light displays are not covered by these guidelines. However, the Association may adopt reasonable time, place and manner restrictions for the purpose of minimizing damage and disturbance to property and other residents.
15. No lighting will be permitted in Natural Areas/Open Space or arroyo areas. Site Lighting must be confined to areas enclosed by walls, unless properly screened by landscaping and landforms (i.e. berms, rock outcrops), or be in the immediate vicinity of the main entrance, with the exception of walkways from the street to the front door. This lighting must be the minimum necessary for safe passage.
16. Site Lighting may be directed onto vegetation or prominent site features, such as boulders, but not on the building and must be approved by the Founder.
17. The use of solar landscape light fixtures and fluorescent fixtures are strongly encouraged to conserve energy.
18. The special Mariposa street light will be used for all streetlights within the community. Information and specifications on this fixture may be obtained from the Founder.
19. Warm white and natural lamps are preferred to minimize detrimental effects.

### **Prohibited lighting**

The following lighting types are prohibited at Mariposa:

1. **Metal Halide**
2. **Quartz\***
3. **Mercury Vapor**
4. **Laser Light or similar high intensity for advertising or entertainment**
5. **Searchlights**

\*For the purposes of these standards, quartz lamps shall not be considered an incandescent light source.

### **Street Lights**

Streetlights required by the City of Rio Rancho are to be placed at intersections and at the end of streets as well as other locations. Founder has no responsibility for or control over the placement of streetlights. Care should be taken when designing views taking these streetlights into consideration. The streetlights were specially designed using a dark bronze color to blend with the background; are shielded to hide the light source directing light downward; have sharp cut-off lenses to minimize light pollution.

## **SIGNAGE**

*Design Objective:* To make signage and address identification at Mariposa as unobtrusive and integral to the environment as possible. All signs at Mariposa must conform to a unified standard prescribed by the Founder.

### ***Requirements and Recommendations:***

1. Only *one* "For Sale" and/or resale sign placed on the lot must be of the standard sign size (not to exceed 4' X 4') unless approved by the Founder.
2. Owner may install address identification. Address numbers must be integrated into building walls, freestanding walls or, on mailboxes. Numerals may not exceed 6 inches in height and must be of materials and colors that harmonize with the building design. Address identification must be positioned so it is easily visible from the street.
3. Banners or other sign material attached to structures are not allowed.
4. Banners, flags and balloons are not allowed on any "For Sale" or open house signs.
5. On a model home site or complex up to three flags, no higher than 18 feet, may be allowed with Founder approval.
6. One sign per model home is allowed and must be approved by the Founder prior to installation.
7. One construction sign is allowed per lot, which must be removed upon completion of the house. Supplemental signs such as financing, subcontractors, interior designers, pool contractors, landscape contractors, or supplier are not allowed.

## **MAILBOXES**

Each neighborhood will include a cluster mailbox, which must meet the design and location criteria of the U.S. Postal Service and the Founder. The Founder encourages the use of low landscape materials or view walls to help screen these units while still providing security and safety for the residents who use them.

## **BASKETBALL GOALS AND BACKBOARDS**

### ***Requirements and Recommendations:***

1. Basketball goals may be installed with approval of the Founder (either permanent or temporary) unless specified otherwise in the Neighborhood Supplemental Declaration and/or Guidelines.
2. Developers are encouraged to provide a basketball goal with the neighborhood park for the use by the residents. If such a basketball goal is provided, the Founder may not approve individual goals within a reasonable distance of the common basketball goal.
3. Basketball goals/backboards should be located as close to the house/garage as possible to reduce the visible impact.
4. Founder may require landscaping for additional screening.

## **ANTENNAE AND FLAGPOLES**

### ***Requirements and Recommendations:***

1. Special care should be taken to locate antennae or satellite dishes of any sort, in areas that minimize the visibility from neighboring lots, common areas, streets, or public areas.

2. No satellite dish larger than 24 inches in diameter is allowed. No vertical antennas are allowed, unless fully screened by parapet walls. The view of dish satellites from adjoining lots, open space or streets must be minimized by sitting and or screening.
3. The Founder must approve permanent and temporary flagpoles. Flagpoles may not be higher than the highest point on the house, adjacent to the flagpole location (excluding chimneys) and must be located in close proximity to the structure.
4. Decorative flags, balloons, beacons or banners are not permitted on any lot except as may be approved by the Founder for special events.

## **SERVICE YARDS**

### *Requirements and Recommendations:*

1. All garbage and trash containers, clotheslines, mechanical equipment, and other outdoor maintenance and service facilities must be screened by walls from other lots, streets, common areas, or public spaces.

## **UNDER SLAB DUCTS**

### *Requirements and Recommendations:*

1. To avoid potential problems with water entering under slab ducts it is encouraged that consideration be given to eliminating under slab ducts, or making under slab duct work impervious to water.

## **UTILITY METERS AND MECHANICAL EQUIPMENT**

### *Requirements and Recommendations:*

1. All utility meters and exterior equipment must be painted to match the building color and/or be screened with a wall or landscaping material.
2. It is strongly encouraged that utility meters and exterior equipment be placed in a location that does not interfere with the front elevation of the residence.
3. All exterior mechanical equipment (roof or ground mounted) must be screened from view of the street, open space and adjacent properties, as determined by the Founder.
4. The Founder must approve the location of all exterior mechanical equipment and screening prior to installation. Every effort should be made to show the location and screening on all plans at the time of submittal.
5. Any changes to approved location or screening of mechanical equipment, must be approved by the Founder.

## **RADON GAS PROTECTION**

### *Requirements and Recommendations:*

1. Although there has been no indication that significant amounts of radon gas are present in the soil of Mariposa, Founder recommends that a competent professional test each building site for the presence of radon gas.
2. If a determination is made that a radon gas ventilation system is needed, the design professional should be made aware of this and include it in the design of the residence.

## LANDSCAPE

*The goals of the landscape design for Mariposa are ensuring an aesthetically pleasing landscape which maintains the existing character of the site while minimizing water use for irrigation; increasing the habitat available to wildlife; and producing s fewer allergens than an unplanned landscape with similar quantity of plant material. To achieve these goals, vegetation used at Mariposa must be predominantly native plant material. To maintain the existing character of the site, native plants will be drawn from plant communities, which are found, on the property or in the region. Plant communities are groups of plants that thrive within similar sun, soils and water conditions. Dominant plant communities will be expanded with particular emphasis on those containing large shrubs and trees. Some plant materials found on the site, while native to New Mexico but not indigenous to Mariposa, will be considered inappropriate for certain areas within the community. This planting concept at Mariposa will help blend new construction gracefully into the existing landscape.*

## MARIPOSA LANDSCAPE

### *Requirements and Recommendations:*

1. Developers are required to provide a streetscape plan to be used as the basis for all of the front yards with the Neighborhood and the Founder must approve this plan. Landscape concepts for the entries and along exterior community walls will be designed and constructed by the Founder. Also a Neighborhood Private Open Space/Park plan must be approved by the Founder, which includes but not limited to the designs of play areas and outdoor spaces, that include central recreation and landscape amenities, such as a Neighborhood basketball goal or fountain.
2. The Developers/Builders must install the landscaping in the front yard of each house in accordance with the approved streetscape plan.
3. Traditional Blue Grass and other similar turf are not allowed in visible areas and cannot be used in the front or side yards unless behind a courtyard wall or solid gate, but can be used in the rear yard.
4. As will be shown on the streetscape plan, there will be no limit using Buffalo Grass, Blue Grama Grass and other native grasses in front yards.
5. The streetscape plan must show the minimum number, size, variety and general location of native plants and trees required for the front yard.
6. All plant materials in public areas, front and side of homes, must be from the Mariposa approved plant list.
7. Plant materials, which are not on the approved Mariposa plant list, will not be allowed in the public areas of the lots but may be planted in limited quantities and type in the rear and side yards, with approved by the Founder, as long as they are placed behind a wall.
8. Views of non-native materials from adjacent properties, streets and open space must be minimized. This may require maintaining a specific height restriction of non-native plant materials.
9. Gravel, rock, crushed or decomposed granite or other such material as well as wood chip or other similar mulches or groundcovers should not be the prominent feature of the front yard landscaping at plant maturity. These ground cover materials should not be the focus or principal elements of the landscape plan but, if used, should be an accent.
10. All aspects of Common Area landscaping are to be maintained by the Mariposa Community Association.
11. After completion of the initial landscaping, any modifications or additions by the property owner must be submitted to the Founder for approval.
12. Plants on the prohibited list may not be planted anywhere in Mariposa

## THE PLANT COMMUNITIES OF MARIPOSA

*Design Objective:* A native plant palette has been developed to ensure that landscapes within the development are consistent with the aesthetic of the Master Plan, water conservation objectives and wildlife conservation goals. Use of a plant palette that is dominated by native plants will establish a sense of place and belonging for the developed properties at Mariposa. The adjacent arroyos will remain in their natural state.



**Requirements and Recommendations:**

1. There are two plant communities in Mariposa, the developed areas and the arroyos. The developed areas include the landscaped areas of the lots, parks and common areas.
2. The major arroyos on the site shall be maintained in their natural state. If disturbances are caused by roadway, drainage or utility construction, replanting with plants from the native palette is required.

**PLANTING GUIDELINES**

*Design Objective:* Care should be taken to protect existing plants at Mariposa where practical.

**Requirements and Recommendations:**

1. Although not required, it is hoped that Developers/Builders will protect existing and significant plants by designing around or transplanting them.
2. Competent professionals should be consulted prior to transplanting any natural materials.
3. All projects and yards must be maintained in a neat and attractive condition. The minimum requirements include replacing dead or dying plant materials, weeding, watering and general clean up.
4. All plantings outside of the community wall in the streetscape common area must be from the approved Mariposa Plant List. Oasis or non-native planting may be installed but only behind the walls of the property.
5. Landscaping in front yards and all common areas shall be completed with all irrigation and trees installed, shrubs and grass planted within two months of completion of building construction.
6. The use of buffalo grass or other approved native grass turf is encouraged when appropriate.
7. All landscaping materials installed in Mariposa must comply with the following minimum size standards.

| <b>Vegetation Type</b> | <b>Min. Size Standards</b>                       |
|------------------------|--|
| Deciduous Trees        | 2" caliper (standard) or 8' height (mulit-trunk) |
| Evergreen Trees        | 8' Height  |
| Shrubs                 | 5 gallon   |
| Groundcovers           | 1 gallon   |

**APPROVED PLANT LIST**

*Design Objective:* The Founder has deemed the plants included in the following list to be indigenous to and compatible with the Mariposa environment and requires their use.. Any species not on this list may not be planted or installed at Mariposa without written approval from the Founder.

| <b>Common Name</b> | <b>Scientific Name</b> |
|--------------------|------------------------|
| <b>Trees</b>       |                        |
| Arizona Walnut     | Juglans major          |
| Arizona White Oak  | Quercus arizona        |
| Austrian Pine      | Pinus nigra austriaca  |
| Bigtooth Maple     | Acer grandidentatum    |
| Box Elder          | Acer negundo           |

Bristlecone Pine  
 Chitalpa  
 Chokecherry  
 Desert Willow  
 Eastern Redbud  
 Emory Oak  
 Escarpment Live Oak  
 Fragrant Ash  
 Gambel Oak  
 Gray Oak  
 Hackberry  
 Hawthorn Species  
 Hoptree  
 Limber Pine  
 Mexican Elder  
 Nettleaf or Common Hackberry  
 New Mexico Locust  
 Oklahoma Redbud  
 One-seed Juniper  
 Pinon Pine  
 Prarie Flameleaf Sumac  
 Purple Robe  
 Quaking Aspen  
 Rocky Mountain Maple  
 Rocky Mountain Juniper  
 Scotch Pine  
 Shrub Live Oak  
 Smoke Tree  
 Soap Tree Yucca  
 Southwestern White Pine  
 Velvet Ash  
 Vitex  
 Wavyleaf Oak  
 Western Redbud

Pinus arstata  
 Chiltaipa Tashkentensis  
 Prunus virginiana  
 Chilopsis linearis  
 Cercis canadensis  
 Quercus emoryi  
 Quercus fusiformis  
 Fraxinus cuspidata  
 Quercus gambelli  
 Quercus grisea  
 Celtis occidentalis  
 Crataegus sp.  
 Ptellea trifoliata  
 Pinus flexilis  
 Sambucus mexicanas  
 Celtis reticulata  
 Robinia neomexicana  
 Cercus reniformis  
 Juniperus monosperma  
 Pinus edulis  
 Rhus lanceolata  
 Robinia ambigua  
 Populus tremuloides  
 Acer glabrum  
 Juniperus scopulorum  
 Pinus sylvestris  
 Quercus turbinella  
 Cotinus  
 Yucca eiata  
 Pinus stroblformis  
 Fraxinus velutina  
 V. angus-castus  
 Quercus undulata  
 Cercis occidentalis

### ***Shrubs***

Algarita  
 Algerita  
 Antelope Bitterbrush  
 Apache Plume  
 Austrian Copper Rose  
 Autumn Sage  
 Beargrass  
 Big Beargrass  
 Bigleaf Sage  
 Bluemist Bluebeard  
 Broom Dalea  
 Brownspine prickly pear  
 Buffaloberry  
 Butterflybush  
 Chamisa  
 Cherry Sage  
 Chokecherry  
 Cholla  
 Cinquefoil (potentilla)  
 Cliff felderbush  
 Cliff-rose  
 Club cholla  
 Compact Oregon Grapeholly  
 Coralberry  
 Creeping Oregon grape  
 Curl Leaf Mt. Mahogany  
 Desert Broom  
 Desert Ceonothus

Mahonia trifoliolata  
 Berberis haematocarpa  
 Purshia tridentata  
 Fallugia paradoxa  
 Rosa foetida bicolor  
 Salvia greggii  
 Nolina texana  
 Nolina Microcarpa  
 Artemisia tridentata  
 Caryopteris x clandonensis  
 Psorothamnus scorparius  
 Opuntia phaeacantha  
 Shepherdia canadensis  
 Buddeia alternifolia  
 Chrysothamnus nauseosus  
 Salvia greggii  
 Prunus vigernana  
 Opuntia imbricata  
 Potentilla fruticosa  
 Fendlera rupicola  
 Cowania mexicana  
 Opuntia clavata  
 Mahonia aquifolium "compact"  
 Symphoricarposorbiculatus  
 Berberis repens  
 Cercoparpus ledifolius  
 Baccharis salicina  
 Ceanothus greggii

|                        |                                       |
|------------------------|---------------------------------------|
| Desert Prickly Pear    | <i>Opuntia engelmannii</i>            |
| Dunebroom              | <i>Parryella filifolia</i>            |
| Dwarf Butterfly Bush   | <i>Buddleia davidi nanohensis</i>     |
| Dwarf Chamisa          | <i>Chrysothamnus depressus</i>        |
| False Indigo           | <i>Amorpha fruticosa</i>              |
| Feather Dalea          | <i>Dalea formosa</i>                  |
| Fernbush               | <i>Chamaebatiaria millefolium</i>     |
| Four Wing Saltbush     | <i>Atriplex canescens</i>             |
| Fringe Sage            | <i>Artemisia frigida</i>              |
| Gardner's Saltbush     | <i>Atriplex gardneri</i>              |
| Golden Current         | <i>Ribes aureum</i>                   |
| Green Sotol            | <i>Dassyirion leiphyllum</i>          |
| Greenleaf Manzanita    | <i>Arctostaphylos patula</i>          |
| Greyleaf Cotoneaster   | <i>Cotoneaster glaucophylla</i>       |
| Hedgehog cactus        | <i>Echinocereus</i> spp.              |
| Horehound              | <i>Marrubium vulgare</i>              |
| Joint Fir              | <i>Ephedra torryana</i>               |
| Lady Bank's Rose       | <i>Rosa banksiae "Lutea" or Alba'</i> |
| Littleleaf Sumac       | <i>Rhus microphylla</i>               |
| Mariola                | <i>Parthenium incanum</i>             |
| Morman tea             | <i>Ephedra viridis</i>                |
| Mountain Mehogany      | <i>Cercocarpus montanus</i>           |
| Mugo Pine              | <i>Pinus mugo</i>                     |
| New Mexico Agave       | <i>Agave neomexicana</i>              |
| New Mexico Olive       | <i>Forestiera neomexicana</i>         |
| Oregonillo             | <i>Aloysia wrightii</i>               |
| Perry's Agave          | <i>Agave parri</i>                    |
| Persian Yellow Rose    | <i>Rose foetida persica</i>           |
| Pointleaf Manzanita    | <i>Arctostaphylos pungens</i>         |
| Prarie Sage            | <i>Artemisia ludoviciana</i>          |
| Red Yucca              | <i>Hesperaloe parviflora</i>          |
| Red-Osier Dogwood      | <i>Cornus stolonifera</i>             |
| Rock Spray             | <i>Holodiscus dumosus</i>             |
| Rocky Mountain Zinnia  | <i>Zinnia grandiflora</i>             |
| Sand Cherry            | <i>Prunus besseyi</i>                 |
| Scotch Broom           | <i>Cytissus scoparius</i>             |
| Seapweed               | <i>Baccharis glutinosa</i>            |
| Serviceberry           | <i>Amelanchier alnifolia</i>          |
| Shadescale             | <i>Atriplex confertifolia</i>         |
| Siberian Peashrub      | <i>Caragana arborescens</i>           |
| Silver Buffaloberry    | <i>Shepherdia argentea</i>            |
| Silverberry            | <i>Elgagnus pungens</i>               |
| Silverlace Vina        | <i>Polygonum aubertii</i>             |
| Smooth Sumac           | <i>Rhus giebra</i>                    |
| Snowberry              | <i>Symphoricarpos Albus</i>           |
| Soaptree Yucca         | <i>Yucca eiata</i>                    |
| Soaptree Yucca         | <i>Yucca glauca</i>                   |
| Sotol                  | <i>dasyilirion wheeleri</i>           |
| Spanish Broom          | <i>Spartium junceum</i>               |
| Spanish Dagger         | <i>Yucca baccata</i>                  |
| Staghorn Sumac         | <i>Rhus typhina</i>                   |
| Summer Broom           | <i>Genista lydia</i>                  |
| Summer Broom           | <i>Genista multibracteata</i>         |
| Threadleaf Sage        | <i>Artemisia filifolia</i>            |
| Three Leaf Sumac       | <i>Rhus trilobata</i>                 |
| Turpentine bush        | <i>Ericameria laricifolia</i>         |
| Utah Agave             | <i>Agave utahensis</i>                |
| Utah Serviceberry      | <i>Amelanchier utahensis</i>          |
| Wax Currant            | <i>Ribes cereum</i>                   |
| Western Virgin"s Bower | <i>Clematis ligusticifolia</i>        |
| Western Sand Cherry    | <i>Prunus besseyi</i>                 |
| Winter Jasmine         | <i>Jasminum nudiflorum</i>            |

Winterfat  
Winterfat  
Wolfberry  
Woodbine  
Woods Rose

***Herbaceous***

Angelita Daisy  
Autumn Joy Sedum,  
Rosy Glow, Cape B  
Beach Wormwood  
Blackfoot Daisy  
Blanket flower  
Blue Butterflies' Dwarf Delph  
Blue Flax  
Blue Spurge  
Blue-eyed Grass  
Bowles Mauve-walflower  
Bubblegum Mint  
Bush Morning Glory  
Bush Penstemon  
Butterfly Weed  
Cardinal Penstemon  
Catmint  
Chocolate flower  
Common Thyme  
Coral Mint  
Creeping Baby's Breath  
Curry Plant  
Dakota Verbena  
Dakota Verbena  
Desert Beardtongue  
Desert Marigold  
Desert Sage  
English Lavender  
Fern Verbena  
Firecracker Penstemon  
Garden Sage  
Garlic Chives  
Gaura  
Gayfeather  
Germander, creeping  
Giant Four-O'Clock  
Globemallow  
Golden Aster  
Hen-n-Chicks  
Hummingbird Mint  
Hummingbird plant,  
California Fuschia  
Indian Paintbrush  
James Penstemon  
Kinnikinnick  
Lady Bank's Rose  
Maximillian Sunflower  
Mexican Evening Primrose  
Mexican Hat  
Mexican Sage  
Mock Strawberry  
Moonshine Yarrow  
Narrowleaf Penstemon  
Nodding Onion  
Oregano  
Organ Mt. Primrose  
Ornamental Catmint  
Palmer Penstemon

Eurotia lanata  
Ceratoides lantana  
Lycium pallidum  
Parthenocissus inserta  
Rosa woodsii

Hymenoxys acaulis  
  
Sedum spp.  
Artemisia stelleriana  
Meiampodium leucanthum  
Gaillardia spp.  
Delphinium chinensis hybrid  
Linum lewisii  
Euphorbia myrsinites  
Sisyrichium bellum  
Ervsimum linifalium  
Agastache cana  
Ipomoea leptophylla  
Penstemon ambigvus  
Asclepias tuberosa  
Penstemon cardinalis  
Nepeta mussini  
Berlandiera lyrata  
Thymus vulgaris/serpyllum  
Agastache rupestris  
Gypsophila repens  
Helichrysum angustifolium  
Verbena bipinnatifida  
Verbena bipinnatifida  
P. pseudospectabilis  
Baileya multiradiata  
Silvia dornii  
Lavandula angustifolia  
Verbena bipinnatifida  
Penstemon eatonii  
Salvia officinalis  
Allium tuberosum  
Gaura lindheimeri  
Liatris punctata  
Teucrium chamaedrys  
Mirabilis multiflora  
Sphaeralsia spp.  
Chrysopsis villosa  
Sempervivum  
Agastache rupestris  
  
Zauschneria californica  
Castilleja species  
Penstemon jamesii  
Artostaphylos uva-ursi  
Rosa banksiae "Lutea" or "Alba"  
Helianthus maximiliani  
Oenothera berlandiera  
Ratibida columnifera  
Salvia leucantha  
Duchesnea indica  
Achillea taygetea  
Penstemon angustifolius caudatus  
Allium cernuum  
Origanum spp.  
Oenothera organensis  
Nepeta mussini  
Penstemon palmeri

|                             |                                 |
|-----------------------------|---------------------------------|
| Paper Flower                | Psilostrophe tagetes            |
| Penstemon                   | Penstemon linarioides           |
| Perky Sue                   | Hymenoxys species               |
| Peruvian Verbena            | Verbena peruviana               |
| Pincushion                  | Dianthus simulans/tiny rubies   |
| Pineleaf Penstemon          | Penstemon pinifolius            |
| Pink Chintz                 | Thymus praecox                  |
| Pitcher Sage                | Salvia azurea grandiflora       |
| Plains Verbena              | Verbena canescens               |
| Powis Castle Wormwood       | Artemisia abrotanum             |
| Purple Aster                | Machaeranthera bigelovii        |
| Purple iceplant             | Delosperma cooperi              |
| Purple Prairie Clover       | Petalostemum purpureum          |
| Pussytoes                   | Antennaria spp.                 |
| Rayed Cota                  | Thelesperma filifolia           |
| Red Hot Poker               | Kniphofia uvaria                |
| Rocky Mountain/Desert Zinia | Zinnia graniflora               |
| Rocky Mountain Penstemon    | Penstemon strictus              |
| Roman Wormwood              | Artemisa pontica                |
| Rosemary                    | Rosmarinus officianalis         |
| Rue                         | Ruta graveolens                 |
| Russian Sage                | Perovskia atriplicifolia        |
| Santolina                   | Santolina chamaecyparissus      |
| Scarlet Bulger              | Penstemon barbatus              |
| Scarlet Mint                | Stephys coopicee                |
| Serbian Yarrow              | Achilas serbioa/milefolium      |
| Siberian Iris               | Iris siberica                   |
| Silver SpeedII/Birdseye/    | Veronica incana/allioni/alba    |
| Turkish Speedwell           | cunefolia/filliformis/liwanesis |
| Silverleaf Groundsel        | Senecio longilobus              |
| Snow-in-Summer              | Cerastium tomentosum            |
| Soapwort                    | Saponia ocymoides               |
| Starflower                  | Ipheon uniflorum                |
| Sundrops                    | Caylophus hartwegii             |
| Sunrose                     | Hellanthemun nummularlum        |
| Sweet Sand Verbena          | Aronia fragrans                 |
| Wasatch Penstemon           | Penstemon cyananthus            |
| Western Verain              | Verbena wrightii                |
| White Evening Primrose      | Oenothera caespitosa            |
| White Yarrow                | Achillea millefolium            |
| Wild Marigold               | Dyssodia acerosa                |
| Wild Onion                  | Allium geyeri                   |
| Winecups                    | Callirhoe involucrata           |
| Woody Veronica              | Veronica pectinata              |
| Woolly Lamb's Ear           | Stachys lanata                  |
| Wooly Thyme                 | Thymus pseudolanuginosis        |
| Wrights Buckwheat           | Eriogonum wrightii              |
| Yellow Evening Primrose     | Oenothera missouriensis         |
| Yellow iceplant             | Delosperma nubigenum            |
| Yerba de Mansa              | Anemopsis californica           |

**Grass**

|                          |                             |
|--------------------------|-----------------------------|
| Alkali Sacaton           | Sporobolus airoides         |
| Ariba Western Wheatgrass | Pascopyrum smithii          |
| Black Grama              | Bouteloua eriopoda          |
| Blue Avena Grass         | Helictotrichon sempervirens |
| Blue Grama               | Bouteloua gracilis          |
| Buffalograss             | Buchloe dactyloides         |
| Burro Grass              | Scieropogon brevifolius     |
| Bush Muhly               | Muhlenbergiaporteri         |
| Cheyenne Indian Grass    | Sorghastrum nutans          |
| Dwarf Feathertop         | Pennisetum villosum         |

|                        |                         |
|------------------------|-------------------------|
| Galleta                | Hilaria jamesii         |
| Giant Sacaton          | Sporobolus wrightii     |
| Hairy Grama            | Bouteloua hirsuta       |
| Indian Ricegrass       | Oryzopsis hymenoides    |
| Little Bluestem        | Andropogon scoparius    |
| Mountain Muhly         | Muhlenbergia montana    |
| Redondo Arizona Fescue | Festuca arizonica       |
| Regal Mist             | Muhlenbergia capillaris |
| Ring Muhly             | Muhlenbergia torreyi    |
| Sano Bluestem          | Andropogon hallii       |
| Sand Dropseed          | Sporobolus cryptandrus  |
| Sand Lovegrass         | Eragrostis trichodes    |
| Side-oats Grama        | Bouteloua curtipendula  |
| Silver Bluestem        | Andropogon barbinodis   |
| Spike Dropseed         | Sporobolus contractus   |
| Sporobolus cryptandrus | Sand Dropseed           |

### Reclamation Seed Mix

The reclamation seed mix must be used to restore all Transition Areas disturbed during the construction process. The most appropriate seed mix is as follows:

| Scientific Name                | Common Name                | Lbs/Ac |
|--------------------------------|----------------------------|--------|
| <i>Bouteloua curtipendula</i>  | Sideoats Grama "Niner"     | 9.0    |
| <i>Bouteloua gracilis</i>      | Blue Grama "Hachita"       | 9.0    |
| <i>Hilaria jamesii</i>         | Indian Rice Grass "Paloma" | 4.0    |
| <i>Oryzopsis hymenoides</i>    | Galleta "Viva"             |        |
| <i>Sporobolus cryptandrus</i>  | Sand Dropseed              | 2.0    |
| <i>Muhlenbergia porteri</i>    | Bush Muhly                 | 1.0    |
| <i>Fallugia paradoxa</i>       | Apache Plume               | 0.5    |
| <i>Ceritoides lanata</i>       | Winterfat                  | 1.5    |
| <i>Chrysothamnus nauseosus</i> | Chamisa                    | 0.5    |
| <i>Verbena bipinnatifida</i>   | Fern Verbena               | 0.75   |
| <i>Aster Bigelovii</i>         | Purple Aster               | 0.5    |
| <i>Senecio longilobus</i>      | Thread leaf Groundsel      | 0.5    |
| <i>Sphaeralcea coccinea</i>    | Scarlet Globemallow        | 0.25   |
| <i>Baileya multiradiata</i>    | Desert Marigold            | 0.5    |
| <i>Linum lewisii</i>           | Blue Flax                  | 0.5    |

### Prohibited Plants

These are plants, which will grow in the Albuquerque area, but due to inappropriate biological or visual characteristics, are prohibited from use anywhere on an Estate or Premiere Lot.

All Palm Trees  
 European Olive - *Olea europaea*, and *Elaeagnus angustifolia*  
 Tamarisk or Salt cedar - *Tamarix* spp.  
 Cypress - *Cupressus* and *Chamaecyparis* spp.  
 Elms - *Ulmus pumila*  
 Mulberry - *Morus alba*  
 Narrow leaf Cottonwood - *Populus angustifolia*  
 Broadleaf Cottonwood - *Populus deltoides*  
 Valley Cottonwood - *Populus fremonti* 'Wislizeni'  
 Poplar Cottonwood - *Populus nigra*  
 Ponderosa Pine –

## **WATER CONSERVATION GOALS**

*Design Objective:* Mariposa seeks to become a model for efficient water use in this arid New Mexican environment. The guidelines for landscaping, building design and construction are conceived to minimize consumption and encourage reuse. Mariposa will continuously promote consciousness about conservation and use, to assure that the water needs of the community and the region are realized. In order to meet the water conservation goals, the following policies for water use at Mariposa shall apply (see the Sustainable Living section of these Guidelines for more information and details on water conservation).

### ***Requirements and Recommendations:***

1. **No resident shall waste water through excessive watering or cause the flow of waste or excess water onto adjacent property, streets or open space.**
2. **Specific water conservation requirements and recommendations for the interior of the home are listed in the Sustainable Living section of these Guidelines.**
3. **No individual wells are allowed at Mariposa.**
4. **Irrigation and watering can not be conducted between 10:00 a.m. to 6:00 p.m. during non-freezing months or at the restricted times in accordance with the governing regulations.**

## **Landscape Irrigation**

### ***Requirements and Recommendations:***

1. **Irrigation system design with head to head coverage will be required for all non-native lawn areas.**
2. **Permanent overhead spray irrigation systems are prohibited on all lots.**
3. **Where irrigation of non-turf area is necessary, drip irrigation systems or bubbler systems should be used.**
4. **Temporary irrigation systems for non-turf areas are encouraged.**
5. **Irrigation systems shall be designed so that peak summertime lawn irrigation can be completed between the hours of 6 pm and 10 am or at restricted times according to governing regulations.**
6. **Pressure vacuum breaker (PVB) or reduced pressure backflow preventer (RP) is required for all residential irrigation as specified by the City Building Code**
7. **An electric, solid-state controller is required for all systems and shall be equipped with a master valve terminal and at least two fully independent programs.**
8. **All irrigated turf grass shall utilize remote electric control valves installed in valve boxes and shall comply with the City of Rio Rancho or Founder requirements where applicable. No manual valves are allowed.**
9. **In no case shall heads irrigating turf grass throw directly into a planting bed, foundation structure, parking lot, sign face, roadway, attached sidewalk, or walkway.**
10. **All turf within public right-of-ways shall be buffalo grass or approved native grasses.**

## **Pools and Water Features**

### ***Requirements and Recommendations:***

1. **Decorative pools shall be limited to three hundred (300) square feet in surface area. Sheet and cascade water features are preferred, and vertical jets with a vertical height greater than six feet are not allowed.**
2. **Swimming pools are limited in size to nine hundred (900) square feet.**
3. **Water fountains, or water features, can be located outside the courtyard area if it approved by the Founder. In no case shall it exceed six feet in height from the finished grade.**

## **Water Harvesting**

***Design Objective:*** Water harvesting at Mariposa refers to a number of techniques and collection systems, mostly passive, which collect and convey a portion of the storm waters generated from the developed portions of the Lot to natural or landscaped areas within the Lot. The use of water harvesting techniques provides a method of delivering moisture that might otherwise be lost, to enhance the growth of the native vegetation and landscaping (see the Sustainable Living section of these Guidelines for more information).

### ***Requirements and Recommendations:***

1. **The use of hidden roof top storage, cisterns, and other techniques for capturing and utilizing rainfall and natural drainage is strongly encouraged and may become a useful and attractive part of the drainage for the lot.**
2. **Above ground swales and ponds, if designed properly, can act as attractive water harvesting features.**



## ARCHITECTURE

*The objective for the architecture at Mariposa is to establish the highest standard of quality for the design of buildings and sensitivity to the environment. The architectural character of Mariposa should reflect the casual elegance of southwestern living. Southwestern character is derived from a wide variety of historic, geographic, cultural, climatic and thematic influences including Native American, Hispanic, Mexican, Anglo, and the experience of the American West, including recognition of the influence technology and industrialization have had on the region. The architecture of Mariposa should reflect the rich heritage of tradition in this special place we live.*

*Architectural character results from a composite of site, form, materials, colors and detailing. Care should be taken to closely adhere to the specific allowable architectural style selected, and not mix elements from various architectural styles.*

*Building in the stark, yet radiant beauty of this desert setting requires respect for this fragile environment.*

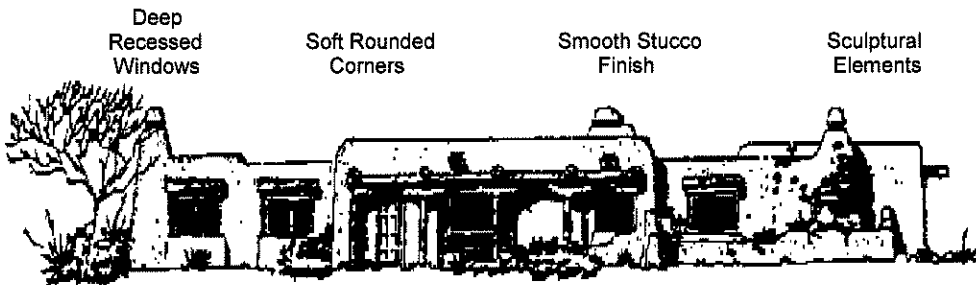
*A section of the Guidelines, entitled "Sustainable Living" at Mariposa details, among other things, the role architecture plays in sustainable building.*

## ARCHITECTURAL STYLES ALLOWED IN MARIPOSA

The possibilities of making a strong regional statement by combining past and present, old and new, guide the selection of the architectural styles at Mariposa. The following is a description of the approved architectural styles for Mariposa, with guidelines for how those styles should be applied. Other architecturally relevant styles may be considered and approved by the Founder.

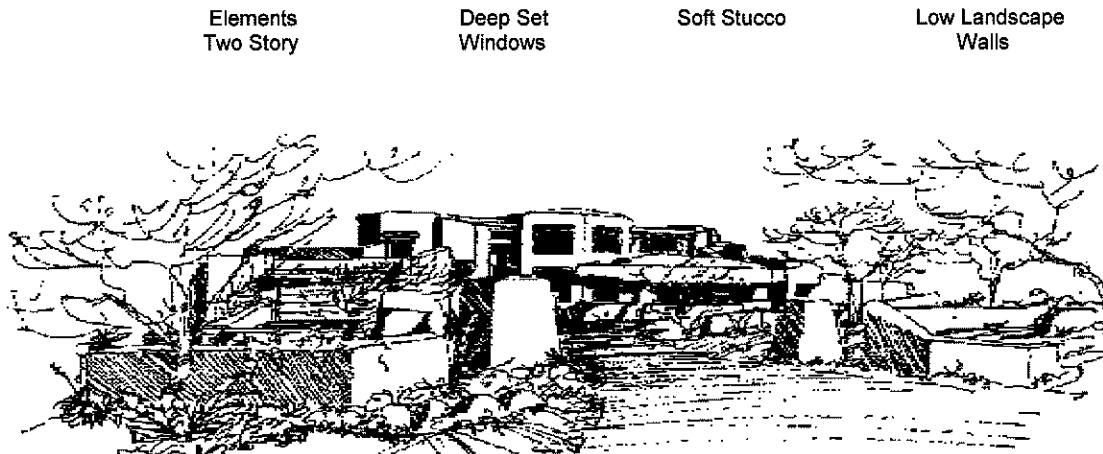
### Pueblo Style

Pueblo style is walled architecture recalling the low adobe, flat roofed dwellings of the northern New Mexico Pueblo Indians. Characterized by the "Pueblo Revival" buildings of historic Santa Fe, pueblo style incorporates deep-set doors and windows, dramatically recessed portals or patios, walled entry corners and edges, radius corners and edges, and is always finished in earth tone adobe. The pueblo style uses no arches or pitched roofs and relies exclusively on post and beam or bearing wall construction. Interesting massing and soft edged smooth stucco are distinctive features of this style.



### Contemporary Pueblo Style

Contemporary interpretations of pueblo style must be historically or stylistically based on the traditional pueblo or pueblo revival architecture, but with skill and sensitivity can successfully incorporate large glass areas and higher ceilings and walls, crisper lines, nontraditional geometric forms and may include combinations of stone and more contemporary materials without losing the sense of strength and mass of the thick adobe walls. This architectural style is often characterized by the absence of nonfunctional decoration and the lack of traditional pueblo decorative ornamentation or detailing.



## Territorial Style

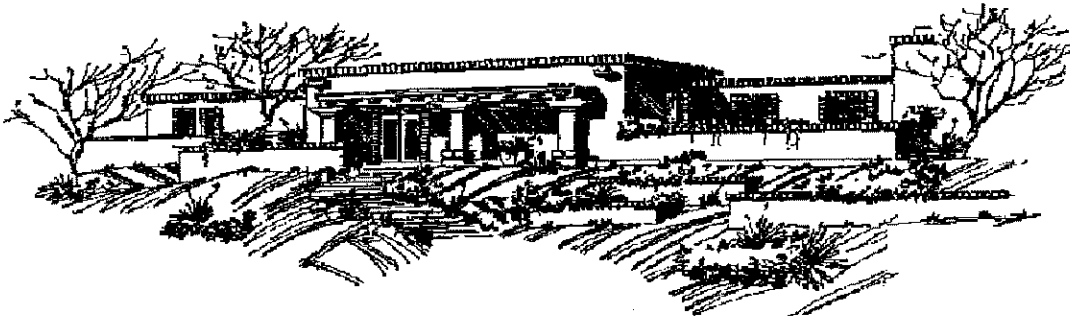
Territorial style is walled architecture, which simulates the low, flat roofed dwellings of territorial New Mexico, during a period when sawmills and brick kilns were first introduced into New Mexico. Brick copings, on the parapet caps, wood columns and decorative wood door and window casings, characterize the style. The territorial style uses no arches or pitched roofs and relies on post and beam and bearing wall construction. Stucco, brick or frame construction, means doors and windows may not be as deeply set, and the edges and corners are not as soft as in the Pueblo style.

Brick or Tile Caps  
on Parapets

Flat Roofs  
with Low Parapets

"Walled In"  
Courtyards

Low Landscape  
Walls

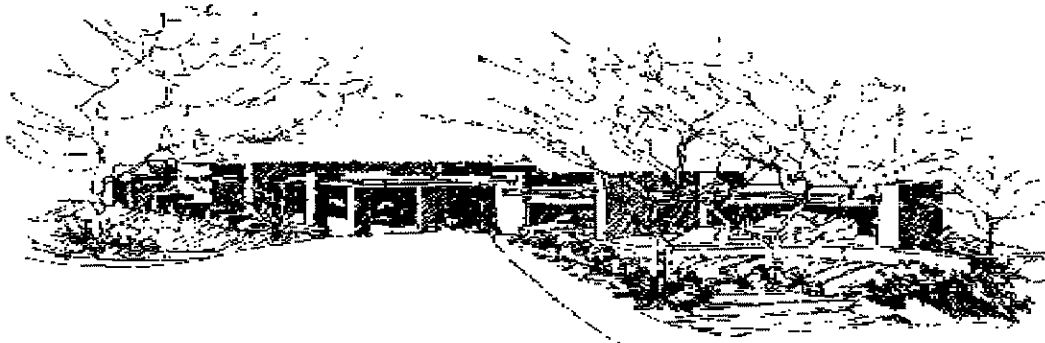


## Contemporary Style

Although contemporary architecture is a somewhat ambiguous label, at Mariposa it refers to buildings created today, whose interpretive art form may or may not be historically or stylistically based. Contemporary design embraces the modernist's exploration of technology and new materials and may result in buildings of lighter weight and often unusual or non-classical geometries. To make them more compatible with the Mariposa environment, contemporary style should incorporate set backs and overhangs, interesting use of windows and window setbacks, be carefully integrated with their sites and incorporate strong horizontal lines. With care, contemporary designs can be climatically derived, sensitively and indigenously structured while exploring non-classical and non-stylistic forms, geometries and spaces, and result in highly compatible, environmentally appropriate architecture. Contemporary architecture at Mariposa should reflect the timeless qualities that are always associated with great design and not rush to embrace fleeting fads.

Smooth Plaster Walls, Split Face Block or  
Stone, Colored Concrete

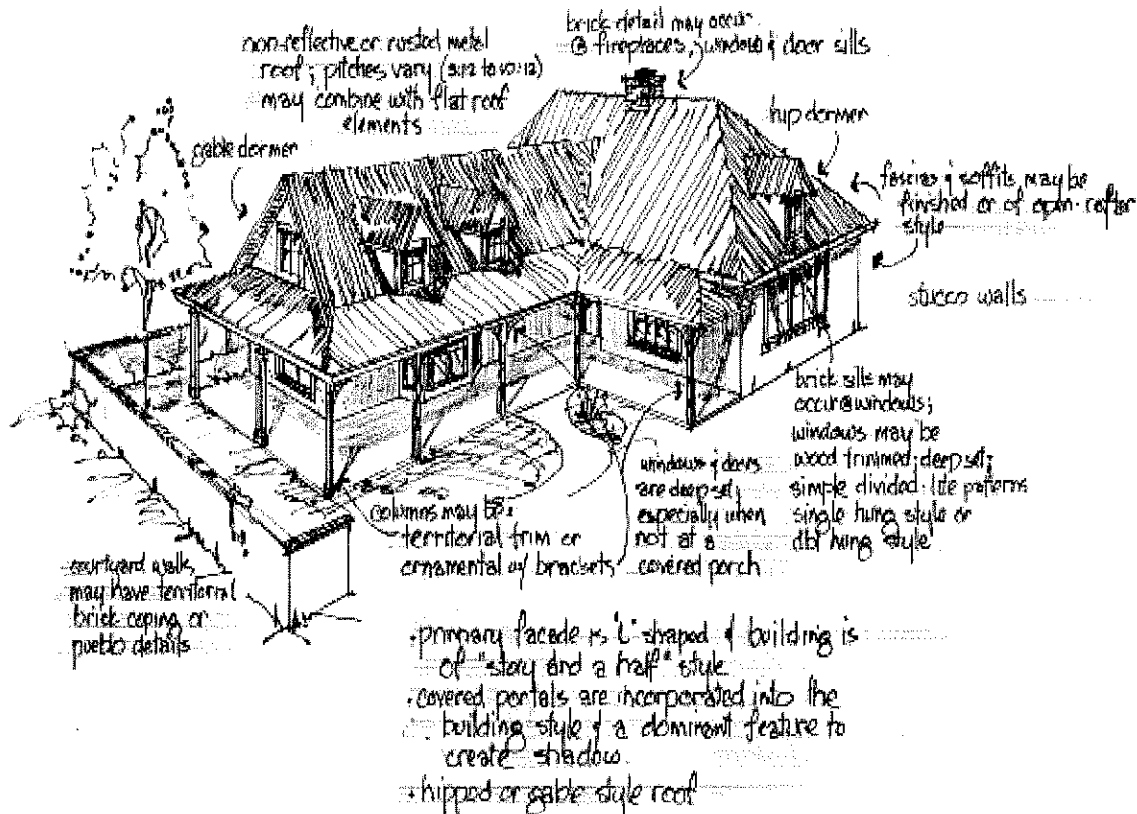
Multi-stepped Wood Fascia



## Northern New Mexico Style

Northern New Mexico style, as defined for Mariposa, is most notably characterized by the metal roof. Historically, the metal roof became the preferred method of protecting the exterior stucco surfaces of adobe and territorial facades of homes in the mountainous regions of our state. It is characterized by non-reflective gray metal roofs, hipped and/or gabled, and may include traditional dormers or gable end dormers. Pitches may vary from building to porch or from one roof plane to another; are not greater than 12:12 or less than 3:12 pitch. Column details may be territorial, have ornamental brackets or even have traditional pueblo round viga posts and corbels. Window details may be territorial or pueblo, but in all cases should be recessed not less than 2" from the exterior of finished stucco exterior wall. Bay windows may occur. Overhangs may be finished with fascias and soffits, or open rafter style, are not greater than 24", or 12" at dormers. Brick details may occur at chimney caps, door and windowsills and topping courtyard walls.

Historically, roof spans were much short than those employed today and as a result traditional northern New Mexico style homes kept very much to scale with the walls that supported them. Since spans of today's trussed roof buildings are greater and have a tendency to create a non-characteristic overstated roof, some flat roof areas with territorial brick parapets or soft rounded pueblo parapets may be used in conjunction with the metal roof. Alternatively, large spans may be broken up by varying plate heights so roofs do not overwhelm the structure.



## Spanish Colonial/Spanish Mission Style

Spanish Colonial and Spanish Mission styles, while characterized as uniquely different, have often been used in New Mexico with overlapping components.

The clay tile roofs that characterize this style are most often low slope, less than 6:12 pitch, primarily gable end style. Spans of the pitched areas are usually quite short, so varying plate heights for different roof planes is strongly encouraged to keep the character of the style from being overwhelmed by an out of scale roof. Pueblo flat-roof parapets may be used in combination with the tile roof areas to minimize the scale of roofed areas. Overhangs are typically open rafter or short with stucco detail. Gable-end features may include ornamental windows or round tile attic vents. Window placements are irregular and deep set; in all cases at least 2" back from the exterior wall surface. Fireplaces vary from top to chimney and caps are detailed. Ornamental windows with iron detailing are common, as are entry doors. Second floor porch rails and columns are most often wood.



## BUILDING HEIGHTS

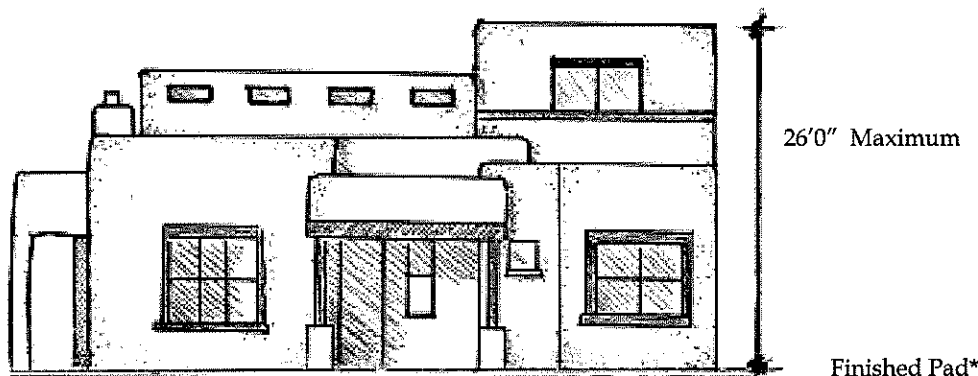
The topography and natural features of Mariposa are dramatically varied with ridges, arroyos and other elevation changes contributing immeasurably to the beauty and quality of the environment. Low profile buildings will minimize intrusion and impact and preserve views and the visual beauty of Mariposa. Therefore buildings should be as low as possible in order to integrate with their surroundings.

### **Requirements and Recommendations:**

1. The maximum overall building height shall not exceed 26' 0" measured from the Approved and Certified Finished Pad Elevation of each lot to the highest point on the structure, excluding chimneys. Pitched roofs are measured to the ridge.
2. The Finished Pad Elevation of each lot must be based on the Engineer Certified and Founder accepted Grading and Drainage Plan for each Neighborhood.

3. The elevation of the highest point on a proposed structure, excluding chimneys, must be indicated and identified as the highest point on all construction plans.
4. Pitched roofs may not exceed a five (5) inch in twelve (12) inch pitch.
5. It may be necessary to utilize flat roofs for portions of homes that have pitched roofs in order to minimize the span and visual impact of the pitched roof portion of the house. Spans of the pitched roof areas of northern New Mexico and Spanish Colonial/Mission styles are usually quite short, so varying plate heights for different roof planes may be required by the Founder to keep the character of the style from being overwhelmed by an out of scale roof.
6. Refer to the Building Massing section below and also the Roofs section.
7. Builders may not align more than 2 two-story homes adjacent to each other along the boundary of a neighborhood.

### **Measurements Of Building Heights**



\*Finished Pad Elevation of each lot must be from the Founder accepted and Developer's Engineer Certified Grading and Drainage Plan for each Neighborhood.

## **BUILDING MASSING**

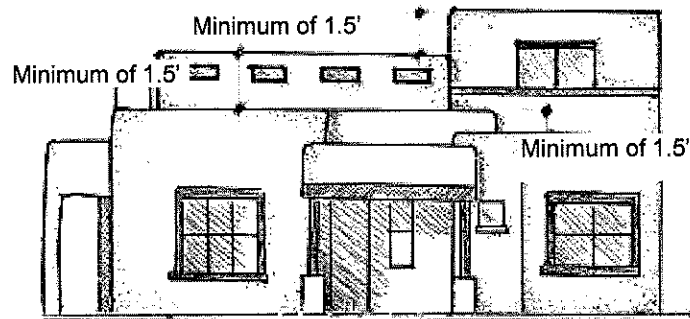
### **Definition:**

A volume of enclosed space, which visually appears as a rectilinear form, consisting of a roof and at least 3 walls.

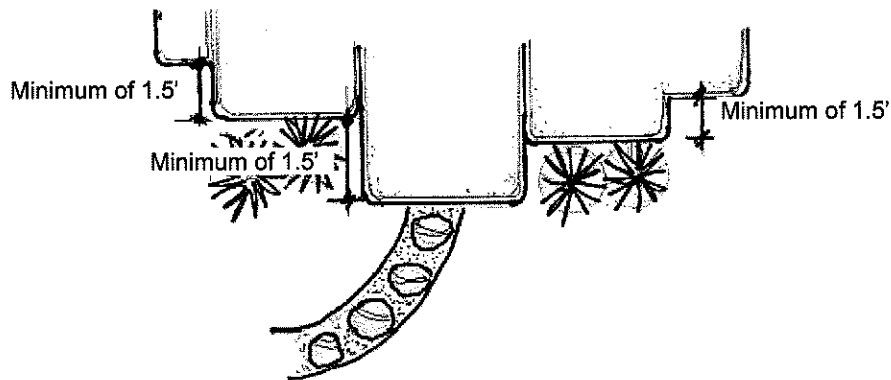
### **Requirements and Recommendations:**

1. Building masses should be predominantly horizontal rather than vertical, yet should not create long unbroken elements.
2. Each building mass must be offset from adjacent masses by at least 1'-6" vertically and 1'-6" horizontally. Mass dimension must be labeled on all plans.
3. Each building must have at least 3 distinct masses visible from the sides facing streets, natural areas/open space and parks.
4. Drawing on the following page depicts Building Massing dimensions.

### **Vertical Building Massing**



### **Horizontal Building Massing**



## **BUILDING MATERIALS**

**Design Objective:** Exterior surfaces must be materials that harmonize with the natural landscape as well as provide an outer skin to withstand the climate extremes. Exterior elements and materials should be limited in number and be compatible with one another, while being in scale with the building. Care should be taken so that materials do not detract from the building's overall appearance or become visually complicated. It should be noted that materials appropriate for one architectural style may not be appropriate for other styles and may not be allowed by the Founder. As an example: barrel tile roofs, while appropriate for Spanish Colonial style homes are not appropriate for any other architectural style. Materials are crucial to creating architectural richness and continuity throughout Mariposa.

#### **Requirements and Recommendations:**

1. On any single building, the materials for exterior application shall be limited in number, compatible with one another and in scale with the building.
2. Materials used for one architectural style may not be appropriate for other styles and may not be allowed by the Founder.
3. Siding materials shall extend down to finished grade to eliminate areas of exposed foundation.
4. The detailing of any elevations exposed to public view should be consistent with the front elevation.

5. These materials are appropriate for use as residential exteriors at Mariposa:
  - a) Exterior plaster or stucco-using a light to medium texture
  - b) Wood (fascia-stained or painted) as accents
  - c) Stone and cultured stone. However (if used) stone and cultured stone should become an integral part of the design and not simply applied on the face of the structure. Thus, the use of this material should wrap columns and distinct building masses
  - d) Rammed Earth
6. These materials may be used with approval of the Founder:
  - a) Ornamental iron
  - b) Concrete (including painted or dyed)
  - c) Oxidized copper and steel
  - d) Ceramic tile
  - e) Concrete columns
  - f) Glass block
  - g) Very dark or opaque glass
  - h) Brick (earth tones occurring at Mariposa)  
Split faced block (earth and landscape tones occurring at Mariposa)
  - i) Other materials may be considered for approval by the Founder
7. These materials are inappropriate and may not be used at Mariposa:
  - a) Exterior plaster of stucco using heavy textures, such as swirl or heavy trowel
  - b) Fixed fabric or plastic awnings
  - c) Exposed standard, colored concrete block or slump block

## BUILDING COLORS

*Design Objective:* Colors should reflect the warm, rich and often vibrant hues of the Mariposa desert, with accents of complementary tones that reflect the traditions of the region. The pre-approved building colors were selected to create a range of colors acceptable in the community. Due to the number and variety of colors to choose from, the color list is only a sampling of the colors permitted.

### *Requirements and Recommendations:*

1. Colors may be chosen from a set of pre-approved colors, established by the Founder. These colors have been carefully chosen for their compatibility with the natural environment, as well as their harmony with one another. Other colors, from this range, may be submitted to the Founder, for approval.
2. It is necessary to provide product color information, including manufacturer, color name, reflectivity percentage and product number to the Founder for approval.
3. Consider the use of darker colors for homes on the ridges and in more exposed locations and lighter colors for homes, which are not on the ridge and in less exposed locations.
4. In general, colors for roofing shall be darker in color and hue than the building's exterior walls.
5. All of the pre-approved colors have a "light reflective value" of 55 or less and may be used anywhere in Mariposa. Other colors may be submitted to the Founder for use on a specific lot, but they must also have a light reflective value of 55 or less and must fall within the general color range listed below.
6. A rendering or drawing of all building elevations depicting all proposed colors and locations must be submitted to the Founder for review. See "Procedure" section of these Guidelines.



## Approved Stucco Colors

### *El Rey Stucco*

|            |            |            |             |
|------------|------------|------------|-------------|
| Acorn      | Driftwood  | La Luz     | Sandalwood  |
| Adobe      | Dry River  | Ore        | Straw       |
| Buffalo    | Fawn       | Pottery    | Stone Bluff |
| Buckskin   | Harristone | Pueblo     | Suede       |
| Clay       | Hogan      | River Rock | Taos        |
| Cottonwood | Husk       | Sahara     | Tierra      |
| Deerskin   |            |            | Timber      |

### *Sto Stucco*

|             |              |             |               |
|-------------|--------------|-------------|---------------|
| Abiquiu     | Duranes      | Pueblo      | Suede         |
| Acoma       | Mesa Del Sol | San Antonio | Torreón       |
| Adobe Brown | Mesilla      | San Juan    | Tumbleweed    |
| Alamo       | Mocha Cream  | Sandia      | Wild Cattails |
| Amarilla    | Pecos        | Sedona      |               |

### *SonnoWall*

|              |          |            |
|--------------|----------|------------|
| Abiquiu      | Nougat   | Sandia     |
| Acoma        | Nutshell | Sedona     |
| Adobe Brown  | Parkland | Soft Blush |
| Brown Berry  | Peach    | Torreón    |
| Mesilla      | Pueblo   | Tumbleweed |
| Mesa Del Sol | San Juan | Woodhue    |

## Accent Stucco Colors

*Design Objective:* The Founder on a case-by-case basis may consider accent stucco colors of a wider palate. These colors may be used in limited areas as determined by the Founder (depending on location) as an example: under a portal, architectural style etc. Any of the approved stucco colors may be considered as accent stucco color. The Founder may consider the additional colors listed below.

### *Approved Accent Stucco Colors*

#### *El Rey*

|             |          |           |      |
|-------------|----------|-----------|------|
| Casa        | Hacienda | Kokanee   | Sage |
| Coral       | Horizon  | Palomino  | Sand |
| Desert Rose | Kettle   | Rio Bravo | Vega |

#### *SonnoWall*

|          |             |              |           |
|----------|-------------|--------------|-----------|
| Cinnabar | Light Spice | Orange Cream | Saltbox   |
| Nambe    | Luna        | Pebble       | Sandpiper |
|          |             |              | Tijeras   |

#### *Sto*

|          |              |        |            |
|----------|--------------|--------|------------|
| Cimmaron | Navajo White | Paloma | Warm Taupe |
|----------|--------------|--------|------------|

## Accent Trim Colors

Accent trim colors on front doors, and window sashes, and other architectural elements are allowed, but must be approved by the Founder.

## ROOFS

*Design Objective:* Desert architecture is commonly a "walled" architecture rather than the "roofed" architecture that is more common to regions with tall trees or heavy rain and snowfall. It is the intent of Mariposa to maintain this desert tradition of walled architecture. However, the use pitched roofs on appropriate architectural styles is allowed. Since roof-scapes form an important part of the visual

environment, they must be carefully designed. In keeping with our goals of visual harmony and sensitivity to our high desert environment, the Mariposa approved architectural styles allow pitched roofs on certain style homes. Pitched roofs are appropriate for Northern New Mexico and Spanish Colonial/Mission architectural styles and may be appropriate on Contemporary architectural styles on a case-by-case basis. Shed roofs may be considered for portions of roofs, or portals on some other styles.

***Requirements and Recommendations:***

1. A maximum slope of five (5) inches in twelve (12) inches is allowed.
2. Flat tile roofs must be dark colored and have a non-reflective surface.
3. Barrel and "S" tile roofs must be a solid color, not variegated and are allowed only on Spanish Colonial/Mission style homes.
4. No roof mounted equipment, including solar panels and air conditioning units are allowed on pitch roofs. Such equipment should be ground mounted or on the flat roof areas of the home. Special care should be taken in locating (and limiting the number) skylights on pitched roofs to minimize their visual impact and reflectivity. On a case-by-case basis the Founder may prohibit use or location of skylights.
5. Roof mounted appurtenances on flat roofs (including, but not limited to skylights, air conditioning/heating units, solar panels and antennas) shall be totally concealed from view as part of the architectural style of the building and not visible from neighboring property or adjoining public right of ways and open space. Every attempt should be made to minimize the visual impact of solar panels and small satellite dishes. Panels shall be an integrated part of the roof and building design and mounted directly to the roof plane.
6. Parapets may be used to conceal roof-mounted equipment.
7. The location of small satellite dishes and solar panels must minimize visual impact and must be approved by the Founder.
8. Parapet copings shall be integral stucco, pre-cast concrete, stone, and brick or oxidized copper.
9. Gutters, down spouts, scuppers, overflows, canals, and other water capture/control devices must be an integral component of the building's design.
10. No asphalt or fiberglass shingles are allowed.

## **Roof Forms**

***Requirements and Recommendations:***

1. These roof forms are appropriate for use at Mariposa:
  - a) Flat roofs with parapets or overhangs
  - b) Combining of one and two-story elements
  - c) Parapets
  - d) Varying plate and wall heights
2. These roof forms may be used with approval of the Founder:
  - a) Hip Roofs
  - b) Shed Roofs
  - c) Domed Roofs
  - d) Gable Roofs
  - e) Dormers
  - f) Arched Roofs

3. These roof forms may not be used at Mariposa:

- a) Gambrel
- b) Mansard
- c) Steeply Pitched

## Roof Materials

### *Requirements and Recommendations:*

1. These roof forms are appropriate for use at Mariposa:
  - a) Built-up roofing (non-reflective) for flat roofs
  - b) Copper (oxidized)
  - c) Single ply membrane (semi-flat roof only/non-reflective) for flat roofs
2. These roofing materials may be used with approval of the Founder:
  - a) Concrete or clay roof tiles, flat or barrel, with integral color
  - b) Multi-colored roof tiles
  - c) Oxidized metal (must have reflectivity of 40% or less)
  - d) Slate Tile
  - e) Standing seam metal (must have reflectivity of 40% or less)
3. These roofing materials may not be used at Mariposa:
  - a) Asphalt or fiberglass shingles
  - b) Concrete tile with surface color
  - c) Thick butt wood shakes
  - d) Wood shingles

## Chimneys and Fireplaces

*Design Objective:* Chimneys shall be simple in design and massive in proportion and designed to match the architectural style of the home. Wood burning fireplaces are minimized to help keep the air clean.

### *Examples of appropriate chimney details:*

Pueblo Stucco  
to match house



Contemporary  
Metal Caps



Contemporary  
Precast  
Concrete Cap



Contemporary  
Stone



Stone  
Stucco Trim



Colonial Spanish



Colonial Spanish  
Stucco



Territorial Brick  
or Decorative Stucco



**Requirements and Recommendations:**

1. Metal flues shall be enclosed in housing of approved material. The Founder will approve materials based upon aesthetic qualities only. While such materials must have sufficient fire-retardant qualities, the Founder makes no representation or guarantees regarding such qualities.
2. Metal flues shall not exceed the minimum height requirements of the City of Rio Rancho Building Code Division.
3. Metal flues must be made of materials and designed to complement the style of the residence. If painted they must match or complement the exterior colors of the residence.
4. Chimneys should be designed to be in scale and proportion with the architecture of the building. All metal flashings, etc., must be painted to match the house.
5. These chimney materials are appropriate for use at Mariposa:
  - a) Stucco to match house
  - b) Pre-cast concrete
  - c) Stucco trim
  - d) Stone
6. These chimney materials may be used with approval of the Founder:
  - a) Brick
  - b) Metal, treated or painted
7. These chimney materials may not be used at Mariposa:
  - a) Wood siding
  - b) Exposed concrete block
  - c) Exposed wood trim
8. Only one wood-burning fireplace per lot is allowed.

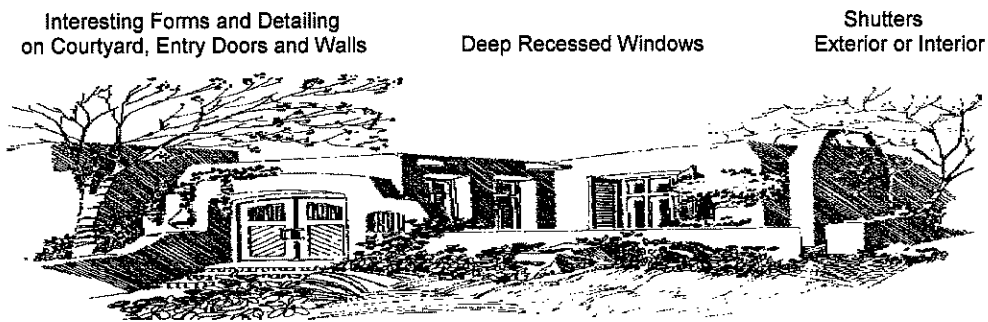
**DOORS AND ENTRIES**

*Design Objective:* Doors and entrances should be appropriate for the architectural style of the home. Exterior doorways and entryways should provide shade protection, depth and a strong shadow-line. They should provide a focal point at the entryway. Courtyards at or near the entry are encouraged.

**Requirements and Recommendations:**

1. "Flat doors" with no detailing, overhang doors or entryways with no elaboration or designation may not be used at Mariposa, unless it is appropriate for the architectural style and approved by the Founder.

**Doors and Entrance Window**



## **GARAGES**

*Design Objective:* One of the challenges of design at Mariposa will be to minimize the impact of garages on the streetscape of a neighborhood. In that regard a number of design recommendations have been formulated.

### **Requirements and Recommendations:**

1. Grouping of driveways and garages in pairs to minimize streetscape disturbance is encouraged.
2. Setting of garages deeper in the lot than the remainder of the home is encouraged.
3. Side entry garages are preferred to those fronting the street.
4. Detached garages and locating toward the rear of the lot is encouraged. Such structures must be in the same architectural style, materials and colors as the residence.

## **Garage Doors**

### **Requirements and Recommendations:**

1. Must be integrated into the design of the main house and materials must be integrated with the residence.
2. The maximum garage door width is 18 feet.
3. Any additional garage, after the first double door or two single doors must be offset in massing by at least two feet horizontally. This must be dimensioned on the plans.
4. Side entry garages are preferred to those fronting the street.
5. Garages sited deeper in the lot are encouraged.
6. Garage doors must be set back from the face of the main wall a minimum 12". This must be dimensioned on the plans.
7. These garage door materials are approved for use at Mariposa:
  - a) Wood, painted or stained
  - b) Metal, painted or treated
  - c) Vinyl, colored to match or accent home
8. These garage door materials may be used with approval by the Founder:
  - a) Glass
  - b) Doors with windows
9. These garage door materials may not be used at Mariposa:
  - a) Untreated wood or metal

## **WINDOWS AND TRIM**

*Design Objective:* Windows are a prominent feature and should be considered carefully to blend with or complement the architectural style of the home.

### **Requirements and Recommendations:**

1. Windows should be set deep into the walls to create a feeling of depth and massiveness, unless not appropriate for the architectural style of the home and approved by the Founder.

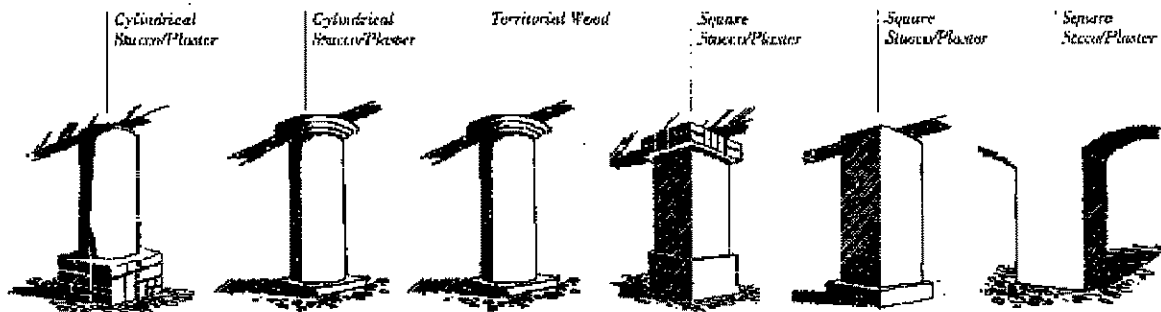
2. Windows must be set back a minimum of two inches from the plane of the house, unless specifically approved by the Founder.
3. Window with colored sashes or frames are appropriate, with Founder approval.
4. Un-anodized aluminum window frames or mullions may not be used at Mariposa. Clear and colored anodized aluminum window frames or mullions may be used for appropriate architectural styles with Founder approval.
5. Copper trim, if unsealed, or treated with a patina finish, may be approved.
6. Fabric, metal or plastic awnings, either fixed or retractable are inappropriate and may not be used at Mariposa.
7. Exterior retractable window and patio vertical screens may be used, but must blend with the color of the structure and be approved by the Founder in advance of installation. No pattern materials are allowed.
8. No "pop out" window surrounds are allowed.

## COLUMNS AND ARCHES

*Design Objective:* Columns and arches should enhance and be appropriate for the architectural style selected. Attention to detail must be given without appearing unnecessarily ornamental. Columns and arches should provide a feeling of strength, depth and interest at windows and entries.

### Columns

These examples of column forms may be used at Mariposa when approved by Founder, if appropriate and depending on the architectural style of the house.



### Requirements and Recommendations:

1. Columns should be simple and integrate with the architectural style of the home.
2. These column materials are appropriate for use at Mariposa:
  - a) Exposed wood
  - b) Square stucco/plaster
  - c) Rectangular stucco/plaster
  - d) Cylindrical stucco/plaster
3. These column materials may be used with approval of the Founder:
  - a) Stone
  - b) Metal

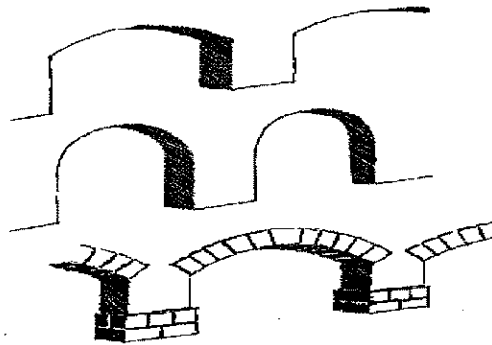
4. These column materials/styles may not be used at Mariposa:

- a) Ornate Corinthian
- b) Ionic designs
- c) Siding Covered
- d) Tuscan
- e) Egyptian
- f) Gothic
- g) Ogee

## Arches

1. These arches are appropriate for use at Mariposa for certain architectural styles:

- a) Massive
- b) Segmented
- c) Full arch



## ELEVATED DECKS

*Design Objective:* Decks must be appropriate for the architectural style selected and materials and colors must be integrated with the style. Attention to detail must be given without appearing unnecessarily ornamental. Deck supports should provide a feeling of strength, depth and interest.

*Requirements and Recommendations:*

- 1. Deck support columns must have visual strength and size to give the appearance of substance, unless hidden from view.
- 2. Second story or elevated decks shall be of materials and colors integral to the main building.
- 3. Detail of the flashing and scuppers to handle drainage may be required. Sheet metal shall be coated.
- 4. Undersides of decks should be finished. No exposed framing is allowed if visible from public view.
- 5. Deck lighting shall comply with the Mariposa lighting standards in these guidelines.

## **SCREENS, SHADES AND ACCESSORY STRUCTURES**

### *Requirements and Recommendations:*

1. Overhead screens, shade covers, patio roofs, and other similar structures shall be constructed of materials and colors to match or complement the architectural style of the building and must be approved by the Founder.
2. Accessory structures, gazebos, playhouses, cabanas, ramadas, equipment structures and enclosures, etc., shall be constructed of materials and colors to match or complement the architectural style of the residence and must be approved by the Founder.
3. The maximum height of any accessory structure cannot exceed 10 feet.
4. Any accessory structure must conform to all setback requirements.
5. Exterior retractable window and patio screens must blend with the color of the structure and be approved by the Founder in advance of installation. No patterned materials are allowed.
6. All City of Rio Rancho requirements for such structures must be met.

## **PLAY STRUCTURES**

Play structures should be sized, located and screened to not interfere with the visual harmony and enjoyment of the community by other owners in Mariposa. Recreational opportunities in private backyards are important to families in the community. However, play structure size, material, color, location and screening should be carefully considered.

### *Requirements and Recommendations:*

1. All play equipment must be submitted to and approved by the Founder prior to installation or construction.
2. All structural elements (permanent or temporary) must be located within the backyard.
3. Maximum height of 10 feet, measured the bottom of the structure to the top of the structure.
4. No moving parts are allowed, which are not integral to the function of the equipment. Prohibited items are, but are not limited to, flags, banners, pinwheels and horns.
5. Primary and bright colors may be used only as limited accents. No bright, or primary color will be allowed to dominate, or cover the majority of the play equipment/structure. Metallic and reflective colors (gold, silver, etc.) will not be allowed.
6. Muted, pastel and secondary colors are required for the dominant area on all play structures/equipment in order to minimize visual distraction. Colors should blend with the landscape.
7. To minimize the view and noise of play equipment landscape screening may be required by the Founder.

## **OUTDOOR ART AND SCULPTURE**

Outdoor art or sculpture is allowed only with the approval of the Founder. Outdoor art or sculpture should be principally for the enjoyment of the owner and should be carefully integrated with the residence, site and landscape design to ensure it does not dominate or detract from the environment, or create a negative visual impact on surrounding areas. The Founder may require specific information when reviewing a request, including: photographs, drawings, materials, size, location, lighting, movable parts, or noise generation.



## **PRESERVING AIR AND VISUAL QUALITY**

The region is subject to thermal inversions, which can contribute to a degradation of air quality. Mariposa's goal is to maintain the highest standards of air quality. For this reason, certain provisions shall apply to the construction of fireplaces or solid fuel burning devices within Mariposa.

### ***Requirements and Recommendations:***

- 1. Only one wood-burning fireplace is allowed per lot.**
- 2. No solid fuel-burning device shall be allowed to burn coal.**
- 3. All wood burning fireplaces shall be equipped with a gas-starter device.**
- 4. Natural gas fireplaces incapable of burning wood are exempt from these provisions including the limitation on number of fireplaces.**



## SUSTAINABLE LIVING

*Sustainable development is a concept defined by the United Nations Commission of the Environment as achieving stability of both physical and social systems by meeting the needs of current generations without compromising the ability of future generations to meet their needs.*

*Mariposa has fully embraced the concept of sustainable design and development. Therefore, significant effort has been made to reduce the Mariposa "footprint" on the land and the environment.*

*Sustainable living is a holistic philosophy that includes all aspects of design, function, construction and operations including but not limited to: resource conservation (water, land, energy and materials) day-lighting, indoor air quality, recycling of construction materials and solid waste, and an ongoing philosophy and governance structure to insure that the vision of Mariposa is fulfilled and continues.*

## MARIPOSA COMMITMENT

While this document expresses Mariposa's commitment to the principles of sustainable design, this section is specifically directed to Sustainable Building & Living at Mariposa.

At Mariposa, sustainability means the application of design, construction and operating methods in a manner that will reduce the economic, cultural and environmental impacts of decision-making over the long-term. In order to ensure that this goal is achieved, these Standards and Guidelines for Sustainability have been created. These standards and guidelines far exceed the typical design guidelines written for more conventional real estate projects because they address aesthetic concerns as well as issues pertaining to water quality, energy conservation and environmental impacts, all of which have benefits that will be felt on a local, regional and global level.

Mariposa commits, in its own planning and development practices, to the implementation of many sustainable concepts including strict adherence to tree and shrub avoidance and removal standards, cultural preservation, open space management, solar orientation, surface water management, wastewater management, as well as sustainable construction techniques and approaches. A large percentage of Mariposa will remain undeveloped and habitats for wildlife will be encouraged through the development and enhancement of riparian areas and semi-permanent water sources where appropriate. Drainage channels will be a blend of developed areas and natural vegetation, wetlands and trail links where appropriate. In addition, reclamation of over-grazed land will be an important component.

A community based on the principles of conservation will yield improved quality of life and sustainability. Water harvesting and reuse will contribute to a continuing and plentiful supply of quality water. Buildings are sensitively sited within the landscape, with careful consideration of the use of lighting and construction standards and materials. An extensive network of trails and pedestrian connections encourages fewer automobile trips within the community. Energy conservation measures will have the largest impact over the life of the project.

## BUILDER RECOGNITION

*For the most part the ideas and goals set forth in this section are recommendations. However, the Founder strongly encourages incorporating these ideas into the design and construction of your home(s). The Founder has established a recognition program, in a public manner, those homes that meet, or exceed minimum sustainability standards of established Green Builder programs. These are established Green Building programs that follow the sustainable living philosophy and meet their objectives. The Founder strongly encourages and endorses the participation in these programs. These include the U. S. Department of Energy's Build America Program ([WWW.BUILDINGAMERICA.GOV](http://WWW.BUILDINGAMERICA.GOV)) and the Energy Star Program. Founder may add additional programs if appropriate.*

*Mariposa and the Founder will recognize those Builders meeting the minimum sustainability standards of the established Green Builder programs. These Builders will be authorized to use the Mariposa Sustainable Builder "tag line" in their advertising, marketing material and on any Builder signs in Mariposa. The Founder may have additional recognition programs and award systems set up at a later date.*

## RESOURCE CONSERVATION

### Water Conservation

Water is the most precious natural resource in New Mexico and the American Southwest. The economic and environmental health of the state and region is dependent upon the responsible use of our water resources. It is the goal of Mariposa to provide a model of community development, which utilizes the most progressive techniques in water conservation practices. Careful planning and thoughtful design can demonstrate that water conservation is possible without sacrificing lifestyle choices.

Mariposa seeks to become a model for efficient water use in this arid New Mexican environment. The guidelines for landscaping, building design and construction are conceived to minimize consumption. Mariposa will continuously promote consciousness about conservation and use, to assure that the water needs of the community and the region are realized. As a significant part of the water conservation program at Mariposa, the Founder has built a "state of the art" wastewater treatment facility which creates a very high quality treated effluent that will be reused throughout the community for common area and park landscape irrigation. Thus, not depleting the aquifer to irrigate community landscaping.

### Designing for Water Conservation

The integration of water conservation strategies require early research and analysis prior to design to ensure successful, cost effective integration of alternative water technologies that may require special permitting and/or variances, and that will require integration with other design issues and priorities.

Water conserving appliances and fixtures are now commonly available in New Mexico and must be specified for installation. Designers should strongly consider dual plumbing systems to integrate both potable and gray water lines.

#### *Requirements and Recommendations:*

1. No resident shall waste water or cause or permit the flow of waste or excess water onto adjacent property.
2. Gray water systems, systems that reuse wastewater (other than sewage wastewater) from the residence for landscape irrigation on the lot are encouraged.
3. Specify plumbing fixtures that require less water and exceed fixture requirements of the Energy Policy Act of 1992 (in gallons per minute or gallons per flush). The following flow rates indicate a 20% reduction in the fixture requirements as stated in the Act:

|                                 |                   |
|---------------------------------|-------------------|
| a) Lavatory and Kitchen Faucets | 2.2 GPM @ 80 PSIG |
| b) Showerheads                  | 2.0 GPM @ 80 PSIG |
| c) Gravity Type Tank Toilets    | 1.6 GPF           |

4. No individual wells are allowed at Mariposa.
5. Irrigation systems must be designed so that peak summertime watering can be completed between the hours of 10pm and 6am.

6. **Must install water conserving fixtures and appliances i.e. Energy Star\* pursuant to the state of the art Green Building Standards per the adopted Master Plan.**
7. **There is much debate about the water efficiency of refrigerated ac units and evaporative coolers. While the evaporative cooler uses more water than an ac unit, it does take 4 times the amount of electricity to run an ac unit which causes the electric plants to use more water to generate this additional electricity. The most important issue no matter which cooling system is installed is the design of the system itself. This involves more than using the rule of thumb of a unit for x square feet of area to be cooled. It means using a recognized resource such as the Manual J, to help determine the number, location and size of the units. In this case efficiency in design is the most important factor.**
8. **Mariposa's water budget (balance) assuming reuse to augment outdoor landscaping demand, has the potential to minimize overall reliance on potable water supplies. The water conservation model performed for Mariposa summarizes this, based on the implementation of water conservation and reuse techniques.**
9. **Use of quality pipes, fittings and valves for leak resistance. Also recommend testing, such as Zero-Read, for leaks.**

## **Pools and Water Features**

(See Landscape Section of these guidelines)

## **Drainage and Surface Water Management**

Natural Rainfall is a precious resource and should be managed to help sustain the community and the surrounding region. Surface water management is the opportunity to manage the rainfall runoff for beneficial purposes including reduction of construction costs, improved ecosystems and habitats, sustainability of natural drainage patterns and arroyos after development and a return of water to the aquifer; while at the same time managing storm-water flows and drainage in a safe manner approved by the necessary governmental authorities.

More information, including philosophy, Requirements and Recommendations can be found in the Site Planning Section of these guidelines.

## **Rainwater Collection and Harvesting**

Rainwater catchment systems provide a source of soft, high quality water, reduce reliance on other water sources, and in New Mexico, are cost-effective. It is strongly recommended that roofs and hardened surfaces be designed to capture rainwater during storm events and transport it to cisterns or other storage devices for later irrigation use.

### ***Rainwater Harvesting Components:***

1. **Roof designed as a rainwater catchment area.**
2. **Downspouts connect to underground cistern.**
3. **Underground cistern.**
4. **Irrigation line from cistern to irrigation areas.**
5. **Hardened surfaces, such as driveways designed to transport flow to surface catchment system.**

## **Landscape Irrigation**

Where landscape irrigation is needed, trickle or drip irrigation is required, except for turf areas. The frequent, low pressure application of small amounts of water to the soil area directly surrounding the plant roots maintains a constant level of soil moisture, even though up to 60% less water than conventional water is used. The efficiency and uniformity of a low water flow rate reduces evaporation, runoff, and deep percolation.

More information, including philosophy, requirements and recommendations can be found in the Landscape Section

## **ENERGY EFFICIENCY**

Mariposa recognizes energy efficiency as one of the most critical aspects of sustainability. As such, the Founder makes a commitment to use of renewable sources of energy as well as to high standards for energy efficient buildings. The use of natural ventilation, cooling and heating to the extent practical is encouraged.

Indoor lighting and air quality are also special components of this efficiency equation. Tighter roofs, walls and foundations will require Mariposa to address occupancy loads in many of the buildings for air quality requirements and apply the appropriate systems to address these needs. Lighting will be accomplished utilizing day lighting techniques in combination with energy efficient electric lighting.

### **General Strategy for Energy Efficiency**

Energy efficient design starts with an understanding of climate and the use of strategies in the design appropriate to that climate.

There are several steps to designing a energy efficient building:

- 1. Minimize energy loads**
- 2. Utilize free energy**
- 3. Use clean, efficient technologies**

Similar to “reduce, re-use and recycle,” the steps to design a green building must happen in the order shown or the efforts may be counterproductive and more costly. Unless loads are first minimized, the free energy, such as passive solar gain, will not be sufficient for building demands and the clean technologies will be too expensive to incorporate.

The term “green design” has often been misunderstood and sometimes dismissed as too expensive or having too long a payback. By first reexamining what size mechanical system is really needed - and then reducing the thermal load - more efficient, effective buildings can be created with reduced construction costs and minimized operating expenses. The architect must develop a mutually challenging partnership with their mechanical engineer and work together from the onset to optimize the building’s design.

## **Passive Solar Design**

Passive solar design standards are intended to increase the energy efficiency of buildings by using the warmth from solar exposure during winter months and minimizing solar exposure and heat gain during summer months. Residential buildings should make use of passive solar design to increase the livability and comfort levels of interior and exterior spaces. This can be achieved through a combination of passive solar measures and techniques, including window placement.

Passive solar design is a simple system for capturing “free” solar heat and using it to minimize or eliminate heating needs in a building. Climatically, New Mexico is well suited for both passive solar and day lighting applications and both are encouraged for all structures in varying degrees at Mariposa. Passive solar systems do, however, have a large impact on building form, as proper solar design dictates orientation, window and fenestration design and interior material selection. Passive solar design should be considered at the beginning of the design process.

There are three major components of a passive solar design; proper solar orientation and an understanding of the sun’s path, proper design of windows and thermal mass, and proper sun controls.

### **Solar Orientation**

As with designing for Photovoltaic, passive solar buildings must be oriented properly towards the sun. In general, buildings that are elongated in the east west direction are favorable. Western exposures should be avoided, as shading is difficult. As with PV, it is allowable to have an orientation off of due south by about 15 degrees, although for passive solar design, a southeastern orientation is preferable over southwestern. For additional information on Solar Orientation refer to the Site Planning Section of these Guidelines.

### **Thermal Storage Mass**

Building materials are generally thermally massive, insulative or conductive. Water, stone, concrete and brick are thermally massive materials that will “soak” heat.

An important component of passive solar design is the sizing of thermal mass in a building in direct proportion to the amount of glazing or collector area. Without adequate thermal mass, a building will overheat. Thermal mass soaks up solar radiation when there is excess heat. When heat is needed, such as at night, the thermal mass releases this heat to the space keeping it warm. A well-designed passive solar building will ‘float’ through periods of cold and warm weather due to the regulating influence of thermal mass.

As a general rule, if the south window area is greater than 8% of the total floor area, then thermal mass is needed to prevent overheating.



### **Requirements and Recommendations:**

1. A minimum of 3 - 6 SF of thermal mass for every square foot of south facing glazing.
2. More thermal mass means less temperature fluctuation.
3. Appropriate thermal mass materials are stone, concrete, brick, tile and water. Water is the best thermal mass available and can be stored in tanks adjacent to windows. Thermal mass materials should be chosen that comply with the architectural guidelines set forth in this document.
4. Although the appropriate distributed mass required in an installation varies, a thin, broad spread of materials is usually more effective than a concentration of materials in a small area.
5. Ensure that there is a balanced distribution of mass throughout a given space.
6. Thermal mass should be located directly within the sun's path.
7. The ideal floor thickness for thermal mass is 4".
8. Wall Thickness: Storage wall thickness should be 2" to 4". Thickness greater than 4" will increase performance, although not a great deal. Performance can decrease at a thickness of 8" or greater.
9. Masonry floors should be a medium to dark color.
10. To optimize day lighting opportunities, thermal mass walls should be light colored.
11. There should be no wall-to-wall carpeting over thermal mass floors in a solar building.
12. 40% of the glazing must be oriented within 15° of due south.
13. Use clerestory windows for additional solar gain. Clerestories should be placed in front of the thermal mass walls at a distance of 1.0 to 1.5 times the height of the clerestory wall.

### **Sun Controls**

Sun controls admit sun when it is wanted and block the sun when it is not wanted. In general, all summer sun (which is high in the sky) should be blocked and lower angle winter sun (from the south) should be admitted. Exterior shades can be utilized for effective sun control, and an understanding of the local climate is necessary to adequately design sunshades. A good rule of thumb for solar shading in the greater Albuquerque region is to provide adequate shading to block the September sun at noon. A sun angle calculator can help in determining the altitude of the sun in New Mexico. During September, the noon sun is at an altitude of X. Well-designed shading devices can greatly reduce cooling loads in a building and have a short payback period.

Sun controls on the south side of the building are relatively easy to incorporate with the use of overhangs, trellises or sun shading devices. It is beyond the scope of this document to provide detailed information on designing sunshade. Shading devices such as trellises can be useful to admit daylight while blocking solar gain. Deciduous vines that block summer sun while permitting winter sun can also be advantageous. Coniferous trees avoided.

Sun controls on the north side of buildings are usually not important, however, the summer sun can cause heat gain and glare problems on the north side of a building and, in this case, vertical fins can be used to shade the windows.

East facing windows can often be useful for early morning building warm-up provided that the glare is acceptable. In general, east windows should be minimized.

West facing windows are difficult to shade and can cause day lighting and heat gain problems in both winter and summer. Often the best way to shade west glazing is to use coniferous vegetation to block all direct gain.

Do not rely only on interior window blinds for sun control. While window blinds have some effect, as a portion of the sunlight is reflected out the windows, the majority of the "heat" has already entered the space causing the space to overheat.

## **Types of Passive Solar Systems**

There are three major types of Passive Solar Systems:

### ***Direct Gain***

This is the simplest type of passive solar strategy, which admits sunlight directly through a window to thermal storage (usually a concrete floor). This system will be used extensively at Mariposa in all building types

### ***Attached Sunspace***

Attached sunspaces may be appropriate for essentially it is a greenhouse space on the south side of the building that is allowed to heat up in the winter sun. This heat can then be vented, or allowed to radiate through a thermal mass wall, into the building.

### ***Trombe Wall***

The trombe wall system consists of a thermal storage wall between the space to be heated and south facing glazing. Sunlight passes through the glazing and heats the thermal mass that in turn heats the space. The rate of heat flow through the wall depends on the materials and thickness of the wall. In general, masonry storage walls delay the transfer of heat from the sunny side of the wall to the room by several hours. Water storage walls transfer the heat much more rapidly because they work by convection as well as conduction. Unlike water walls, masonry storage walls can be used as bearing walls and because of their mass, make good acoustical barriers.

## **Photovoltaic Technology**

Photovoltaic and solar thermal panels need to be designed to fit within the architectural guidelines like other mechanical equipment. Photovoltaic Technology (PV) directly convert sunlight into electricity without pollution. Solar thermal panels, which convert the sun's heat to hot water, may also be used at Mariposa. The following guidelines illustrate how buildings will comply with the requirements of photovoltaic or solar thermal panels.

Photovoltaic panels are now available that can serve as a building membrane and surface material as well as an electricity generation device. These new panels are no longer installed on top of a built-up or metal roof but instead are part of the roof system - integral to the architecture, mimicking metal roofs or even shingles, and allowing for integration into the architectural character of the region. Transparent solar panels that can be used as skylights or windows are also available. They can admit daylight into a space while generating electricity.

To design for PV and solar thermal panels, buildings need to be oriented toward the sun at the proper angle. For maximum potential, panels or roof structures should be oriented due south. If this is not possible due to site constraints, it is allowable to move away from the ideal orientation by about 15 degrees, which will result in a small but acceptable loss in efficiency.

The second component for successful solar array design is the slope or solar angle of the array. Typically, for maximum year-round gain in a fixed solar array, the panels should be oriented at the same angle as the latitude (36 degrees) of Mariposa. However, because of the high summer loads at Mariposa (see diagram), it is necessary to optimize the electricity generation capacity in the summer, which will mean a slope of 21 degrees. The acceptable range therefore, is between 36 and 21 degrees, although it is recommended for ease of construction to use standard roof pitch in this range.

***Requirements and Recommendations:***

1. **Most buildings at Mariposa should have at least 50% of their roof area within 15 degrees of true south and within the acceptable solar angle range.**
2. **No building protrusions such as chimneys, water towers or cooling towers may shade the solar panels at any time.**
3. **No buildings may shade the solar aperture of another building. New building design must prove that it is not negatively impacting the solar potential of an existing structure. Designers must also take into consideration the potential of landscape features and tall trees that will shade solar panels.**
4. **The installation and use of solar panels and solar energy is strongly encouraged.**
5. **Solar Panels can be installed on the roof and are most efficient if located to receive the south and west sun.**
6. **Solar Panels may only be installed on the flat portion of any roof and must be screened by parapets.**

## **Day Lighting**

A process of efficiently capturing the available light from the sun to illuminate the interior space. This process will reduce dependence on non-renewable energy sources.

Daylight provides the most pleasing, efficient and inexpensive source of lighting available. Day lighting design is one of the most effective ways to reduce the energy requirements of a building and produces the most amount of light to the least amount of heat. All buildings at Mariposa should include good day lighting design as an integral part of the architectural design.

Day lighting is a free source of energy and can significantly reduce the operating costs of buildings and provides high quality light with even distribution. Many of the buildings at Mariposa are day use only facilities and daylight can provide most of the light during operation. Good day lighting design does not mean simply increasing the amount of available light in a space with larger and more windows which may, in fact, increase glare and increase electric lighting loads needed to offset the glare.

Glare arises from a great amount of contrast, which can distract the eye and cause visual discomfort. Good day lighting design successfully controls the amount and distribution of light for maximum visual comfort.

**Requirements and Recommendations:**

1. The amount of glazing to floor area for a properly daylight space is 30-40% window-wall ratio (depending on climate).
2. Elongate buildings east/west wherever possible to maximize south and north glazing (daylight easily controlled) and to minimize west glazing that can cause excessive glare and heat gain
3. Use sun control devices such as overhangs, sunshades (can incorporate PV), trellises (with deciduous vegetation) or awnings to control glare and heat gain.
4. Integrate day lighting design into the building design from the outset.
5. Arrange buildings so that major interior spaces have access to natural light and seldom used spaces have less access to light. Design interior layout to minimize obstructions within a space that could diminish daylight potential.
6. Design interior spaces to receive natural light when needed, i.e. east-facing bedroom to receive morning light and west facing dining room for evening light.
7. Use light colored surfaces for interior finishes to reflect light and increase the perceived brightness of the room.
8. Design spaces that are within the effective daylight penetration depth (D). Daylight penetration depth is the distance into the interior of a building at which natural light from the sun can provide adequate illumination. This can be calculated by measuring:

$D = 1.5 H$  (height of window) for typical window conditions.

$D = 2H$  for light shelves.

9. Make the distinction between view windows and day lighting windows. Day lighting windows can be located above the field of vision to let light deep into a space. These clerestory windows may allow for reduced window area to increase energy efficiency.
10. Select glazing carefully. Glazing is available with a variety of coatings and qualities. For day lighting, the VLT (visible light transmittance) should be carefully reviewed. Visible light transmittance measures the efficiency of glazing in passing light rays within the visible spectrum. A window with a high visible light transmittance should be selected for windows designed to admit daylight. On west facing windows, or in areas where excessive glare might be a problem, a lower VLT may be desirable (see diagram on choosing glazing). Standard double pane glazing has a visible light transmittance of 80% with low-e 70% VLT.
11. The higher the window, the deeper the day lighting zone.
12. Avoid large expanses of glass without sun controls.
13. Size windows and select glazing at the same time. The larger the window, the lower the visible light transmittance that may be needed. Use the effective aperture approach illustrated below.
14. To maximize daylight potential, encourage higher ceilings or eliminate traditional hung ceilings and expose the building structure.
15. North light is often high quality and consistent with minimal heat gain. Balance size of north windows (due to thermal loss) with desire for daylight.
16. South light has strong illumination and is easily controlled.
17. West and east light allows heat gain and is difficult to control.
18. Do not "waste" glazing where it does not contribute to day lighting or view; i.e. do not place glazing below desk height, unless it is required for passive solar gain.

19. Consider using clear glass above light shelves and tinted glass below to shade glare. The ceiling (and top of the light shelf) should be smooth and light colored, and the top of the light shelf should not be visible from anywhere in the room.
20. Ceiling reflectance should be 80%, for walls 50-70%, floors 20-40%, and furniture 25-45%.
21. Choose matte finishes on walls and ceilings to reduce hot spots or glare.
22. Be aware of site factors that could affect daylight. Light may be reflected off adjacent buildings or surfaces to increase the amount of light in a space. Similarly, trees or buildings might shade and reduce day lighting potential. Plan landscaping accordingly. All buildings at Mariposa must demonstrate that they are not reducing the potential of other structures beyond what is reasonable.
23. When deeper building sections are necessary, consider the use of top lighting devices to introduce daylight. Remember that top lighting can produce glare on room surfaces but not generally in the field of vision, while side lighting tends to produce glare in the field of vision but not on surfaces.
24. Arrange tasks within a space so that those that require the most light (such as workspaces) are located at the periphery and those that require the least light (such as corridors) are located away from the periphery.
25. Where appropriate, include the use of light shelves in the design of structures. Light shelves are horizontal projections with both exterior and interior components that shade exterior glaring, bounce light to the interior ceilings of buildings thus increasing the effective depth of daylight while reducing glare within the space. Glare is caused by excessive contrast and well-designed light shelves block the view of the skydome from within the space, (which is a major source of glare), and reflect light to the ceiling diffusely lighting the space wherever possible encourage light from more than one side of a room, to improve quality of light. Sun controls are an important factor in this strategy.
26. Design rooms that have adequate daylight for the tasks required. Daylight can be expressed as a percentage known as the daylight factor. Most tasks at Mariposa need only about 1.5-2.5% DF. More strenuous tasks may require a DF of up to 4%.

## **Building Envelope**

The single most important component of an energy efficient building is the performance of the building's envelope. Proper detailing, adequate insulation and appropriate specification will result in buildings that are energy efficiency while also lower operating costs and increasing user comfort. In order to meet the Mariposa commitments for energy efficiency, the following minimum requirements for building R-values should be followed. This does not insure compliance, however, and should be considered a starting point only.

**Walls – R Value of 20 for exterior wall insulation**  
**Roof - R Value of 38 for Sloped Roofs and R Value of 30 for Flat Roofs**  
**Windows- R Value of 2.63**

### ***Requirements and Recommendations:***

1. Avoid thermal bridging of materials, which can greatly affect building performance.
2. Minimize air infiltration through the proper sealing of joints and the use of air-lock entryways.
3. Design for proper placement of and vapor barrier where cool surfaces meet warm moist air.
4. When using light frame construction, consider advanced framing techniques that insulate corners and headers while saving wood.

5. Use radiant heat barriers to increase energy efficiency.
6. Use light colored roofing material where appropriate to reduce cooling loads.
7. To increase energy efficiency, use landscape, vegetation or architectural devices to shield building from winter wind, and summer sun.
8. Avoid ductwork on the exterior walls.
9. Seal ducts and returns with mastic or UL181 tape, not cloth-backed taped.
10. Caulk and foam all plumbing and electrical penetrations before drywall is installed.
11. Caulk, foam, tape and weather seal around all joints of the envelope to create a tight, advanced sealing package.
12. Install efficient, ENERGY STAR-rated furnaces.
13. Install a "flashing pan" under each window.

## Windows and Glazing

One of the most misunderstood components of the building envelope is the windows and glazed areas. This is unfortunate, because often windows can be the single most important envelope component because their impact on heating, cooling, lighting and ventilation. Many architects select the same glazing for all areas of a building despite differing conditions. As noted in the day lighting section, all glazing is not created equal and there are many different factors to consider in choosing the appropriate type. Glazing should be selected based on several criteria among them energy performance, daylight contribution, architectural integration, occupant comfort and cost. Section 6, Architecture, addresses the aesthetic treatment of windows and specific material selection.

### *Requirements and Recommendations:*

1. Examine all glazing properties and match with need for daylight, view and thermal characteristics.
2. When maximum daylight is required, a high Visible Light Transmittance (VLT) is desirable. When glare is a problem, a lower VLT is appropriate. A VLT of 50–70 is a good starting point for moderate glare control.
3. Solar heat gain coefficient describes the fraction of solar radiation admitted through a window or skylight that increases heat gain.
4. Specifying glass with a high solar heat gain coefficient (SHGC) where appropriate. To block solar gain, as on west and south sides of buildings, choose a low SHGC. It is important to remember that the SHGC can greatly affect cooling loads in the summer if glazing is unshaded.
5. U-value is a measure of heat transfer through the window and is the inverse of the R-value (resistance to heat loss). A lower U-value means a more energy efficient window, as opposed to the R-value where higher is better. Windows at Mariposa in all structures should be double paned with a low-e coating. In some buildings, the space between the two glass panes can be gas filled, or a system with three panes of glass may be specified to increase efficiency. Window performance is often measured as either a center glass value or total unit value. Center of glass ratings are usually lower than total unit value, which takes into account the effect of the frame and mullions.
6. UV transmittance indicates the percentage of ultraviolet light that penetrates a window. UV contributes to the fading of carpets, fabrics and paintings and should be considered depending on the location of windows.

7. Spectral selectivity refers to the ability of the glazing to respond to different wavelengths of light - admitting, for example, visible light while blocking infrared. Glazing that is good at blocking heat (low SHGC) yet has a high VLT is usually spectrally selective.
8. Do not assume that dark glass is good at blocking solar gain -- that is not always the case.
9. West and east facing glazing should be selected to block solar gain and glare.
10. North glazing - Aim for high VLT and low U-values. SHGC is not a factor.
11. South glazing - Provide proper sun control and aim for high VLT and moderate to high SHGC depending on passive solar strategy.
12. Be aware that glazing color strongly affects the color of an interior and affects the color temperature of interior lighting.
13. The lower the VLT, the darker the interior and the view to the outside.
14. R-values for roof wall and floor to comply with Mariposa requirements.

## **Efficient HVAC Design**

These guidelines do not go into great detail on mechanical systems design, however suggestions for efficient and effective design are included below. In general, all the strategies outlined in this section will help to reduce mechanical loads significantly. (Be wary of the tendency of mechanical designers to over design the system by including large safety factors that compound to produce unreasonably over scaled systems).

### *Requirements and Recommendations:*

1. Use separate HVAC systems to serve areas that have greatly different use schedules or loads.
2. Provide controls that allow systems to operate in occupied and unoccupied modes.
3. Ducts should be larger than minimal size to reduce pressure and fan size.
4. Expand the allowable occupant comfort zone depending on use.
5. Use high efficiency heating and cooling equipment, pumps and motors. Use premium – efficiency motors for all over one horsepower.
6. Primary heating equipment should be sized for the 97% design temperature values. Size primary heating equipment for the 97% design temperature radius and no greater with a target load safety factor of no more than 10% and a heating pick up factor of less than 30%.
7. Include define high efficiency boilers and supply water temperature reset.
8. Design mechanical equipment to maximize the efficiency of distribution.
9. Size transformers and generating units as close to the actual anticipated load as possible.
10. Minimize the cooling tonnage of a building through rightsizing of equipment.
11. Install units with an Energy Star rating.

## Passive Cooling & Ventilation

Sustainable design starts with a good understanding of climate. Warm arid summers and cool winters characterize the Middle Rio Grande region of New Mexico. Many passive strategies are particularly effective in this climate. This is particularly true for passive cooling strategies, many of which are optimal for the climate of the area. The key to understanding passive cooling techniques is comprehending how air moves - from high pressure to low pressure and from warm to cold - and how wind and air can be harnessed for cooling.

Passive cooling is a means of ventilation that has the potential to reduce or eliminate the need for mechanical systems such as fans or air conditioning. As passive cooling strategies have the potential to alter form in a building they must be considered early in the design process to work successfully. The ability to cool is dependent on a good thermal envelope, thermal mass, and occupancy co-operation in many cases. The primary function of natural ventilation is to prevent heat build-up inside the building and to provide air movement.

The first step in an effective passive cooling scheme is to block solar gain (Blocking the sun's heat before it hits the building is the best way to reduce solar heat gain. The required roof materials at Mariposa are a light color to reflect heat. West walls are targets for intense heat absorption and should be shaded by planting or other means and have reduced glazing area. Roof overhangs at south and west walls should be deep enough to prevent the sun from entering a room during the summer months. The principles for building orientation and building form are equally important for cooling as it is for heating. Buildings should be elongated east west wherever possible with adequate sun controls. Thin section buildings that are good for day lighting usually work well for passive cooling and passive heating. The large amounts of thermal mass required for passive heating is also beneficial for summer cooling.

### Cross Ventilation

Cross ventilation is the simplest form of passive cooling, consisting mainly of allowing breezes to flow from one window or opening through a space and out another opening across the space on the leeward side of the building.

Moving air makes warm temperatures seem cooler by quickly removing heat from our bodies. By utilizing passive ventilation, the need for air conditioning is decreased, relying only on good design and natural breezes for cooling.

#### *Requirements and Recommendations:*

1. Operable windows and vents, placed opposite each other and at different heights, capture natural breezes and improve air circulation and quality. Intake openings should be placed low on the windward wall, while larger; exhaust openings should be set high on the leeward wall. To capture cool intake air, windward openings should be well shaded by plants or shade structures.
2. Cross ventilation works best when outside temperatures are below or around the comfort zone. When buildings overheat due to occupants, electric lights, equipment and solar radiation through the building envelope, cross ventilation can be used. When the outside temperature is above the comfort zone, cross ventilation is less effective as warmer air is being introduced into the system.
3. If properly directed, natural air movement will enhance ventilation and provide convective and evaporative cooling. By manipulating the orientation and design of buildings breezes can be directed through interior spaces.



4. Shape and orient the building to maximize exposure to summer breezes. Size inlet and outlets for summer breezes; typically equal size or slightly larger outlet.
5. Typically the inlet is low and the outlet is high.
6. Design open plan interiors for good indoor airflow
7. Orient door and window openings to enhance the cross ventilation effect, and utilize louvers to direct air toward occupants.
8. Use wing walls, overhangs and louvers to direct wind flow into a space. Ceiling fans do a good job of efficiently moving air. Using a ceiling fan along with natural ventilation will help reduce the use of the home's cooling system. A ceiling fan should have a minimum clearance of 10 inches between the ceiling and the fan to provide ventilation in a room with an 8-foot ceiling. There is a formula for the size of the fan (dimensions) to the area of the room that should be followed for efficiency.

### **Stack Ventilation Strategies**

In a building cooled by stack ventilation, warm air rises, exits through openings at the top of the building, and is replaced by cooler air entering low in the building. The rate at which the air moves through the room, carrying heat with it, is a function of the vertical distance between the inlets and outlets, their size, and the difference between the outside temperature and the average inside temperature over the height of the room.

#### ***Requirements and Recommendations:***

1. Design building forms to accelerate breezes to draw warm air out of a building. As air moves over the building it speeds up and provides lift or suction that can be harnessed to draw warm air over the building creating negative suction zones to enhance the stack effect.
2. Passive solar thermal chimneys are being incorporated into buildings with increasing frequency. Use dark surfaces at the top of the tower to create a solar chimney designed solely for the purpose of ventilation. The enclosed space of the chimney, set high in the house, heats up, drawing a steady stream of cooler air in from the lower windows or vents. Because of the thermal mass incorporated in the chimney, the system continues to work through the night.

### **INDOOR ENVIRONMENTAL QUALITY (IEQ)**

A commitment should be made to promote a good indoor environmental quality for better health and comfortability of the home's residents. There are five important aspects to IEQ: Indoor Air Quality, Humidity, Air Movement (discussed previously), Acoustics and Light Intensity and Quality.

#### **Indoor Air Quality (IAQ)**

##### ***Requirements and Recommendations:***

1. To ensure good indoor air quality full commissioning of the HVAC system is necessary (see below) as well as the provision of ventilation where and when it is needed. Proper cleaning and filtration of contaminants in the air supply is also necessary.
2. Use manufactured wood product alternatives to formaldehyde-based adhesives, such as exterior-grade plywood with phenol formaldehyde and other types of manufactured wood made with formaldehyde-free resins.
3. Use direct-vent furnaces. Non-direct furnaces have the potential to back draft or otherwise leak carbon monoxide.

4. Install a ventilation system, which will have a infiltration rate of .35 air changes per hour (ACH) of less.
5. Attached garages can be great sources of indoor air pollutants from vehicles, lawn equipment, stored paints, solvents and other household chemicals. Consider a detached garage or installation of a garage fan.
6. Consider installation of a central vacuum system with outside exhaust to prevent the release of small particles back into the home.
7. Use low to no Volatile Organic Compound (VOC) interior paint products and water based wood finishes.
8. Use plaster finishes of natural materials such as clay.
9. Use formaldehyde-free recycled-content fiberglass insulation or CFC-free spray foam insulation.
10. Building Commissioning is a process that begins after the building is complete and prior to occupancy to confirm that building elements, such as mechanical systems, were built and installed as designed. During commissioning, systems can be fine-tuned to achieve optimal performance. Commissioning insures the delivery of an environmentally balanced building and involves transferring knowledge to the building users so they understand and can manage the systems to maximize efficiency and durability.

## **Humidity**

Ventilation, which was discussed previously, and indoor moisture control are key components for good air quality. Most tightly built new homes have enough water-generated activities to add humidity to the home, in dry conditions like Mariposa humidification may be necessary.

## **Acoustics**

An overlooked element of good indoor environmental quality is the acoustics isolation between rooms of a home.

### ***Requirements and Recommendations:***

1. Avoid air leakage through doorways, around electrical outlets and under the wall sill plate.
2. Avoid conduction thru walls by hanging the gypsum board on one side of the wall on acoustical channels or use separate studs for each side of the wall. Inserting cellulose or fiberglass with the wall can also be used.
3. Avoid transmission of sound thru the floors by inserting impact-absorbing layers under the flooring.
4. Adding sound rooms, which are carefully engineered, to keep sounds from being transmitted through out the house. These sound rooms are usually used for stereo or video presentations, i.e. home theater.
5. Reduce sound thru ductwork by lining with an acoustical duct liner.
6. Place air conditioning or evaporative cooler units to avoid sound sensitive areas like bedrooms.
7. Installing energy efficient higher cost appliances such as dishwashers and refrigerators, which tend to be quieter.

## **Light Intensity and Quality**

Energy efficiency and day lighting were discussed previously in this section. The intensity and quality of lighting have an affect on the indoor environmental quality of a home.

### ***Requirements and Recommendations:***

1. **Over lighting areas is both unpleasant and a waste of energy. Should have low background lighting and place lighting sources such as lamps in areas where more intense light is required, such as work or reading areas.**
2. **Install light controls to allow selected lights to be dimmed or turned off in areas such as eating areas which require more light during food preparation but less when eating.**

## **NATURAL AND RENEWABLE RESOURCES**

Normal home building practices can consume and even waste large quantities of natural resources such as wood, cardboard, plastic and water if not managed carefully. At Mariposa the issue of water conservation, re-use surface water management and water harvesting are discussed in this and other sections of these Guidelines. The main subject of this section deals with the efficient and environmentally conscious use of natural resources such as; wood, cardboard, metal and plastic, both during the design phase of your home as well as during construction.

### **Building Materials**

Material selection is a complex process involving many variables, and considering green building materials can add time and money but more materials are being made available which, when used enough, will reduce the price. It is a fairly new science but one that is a growing and dynamic. Selection of green materials typically involves a review of the product's life cycle impact on the environment, which includes the raw materials used, production process, the transportation, and the disposal, recycling or reuse properties.

When selecting materials to use in the construction of an energy efficient home, the following attributes should be considered:

#### **Renewability**

Materials that are rapidly renewable (growth period) and are derived from biological resources such as trees and agricultural products. Examples include bamboo, cork, natural linoleum and some types of wood and engineered wood products.

#### **Recycled Content**

Materials with recycled content are available for many types of building products and this technology constantly improving. Examples include Riastra, types of insulation, recycled plastic lumber and carpet made from recycled materials.

#### **Reusability/Recyclables**

Is how easily a product may be reused or recycled once it is no longer needed. Products that can be separated from other materials for reuse or recycling. Examples include metal roofing, lumber and windows and doors.

## **Durability**

This describes the expected maintenance and service life of a product. A low maintenance product with a long service life is preferred.

## **Embodied Energy**

This is the energy required to remove, process, package, transport, and install, dispose (recycle) of materials used in the construction of a home. Up to 70% of the total energy invested in a building's construction is embodied

## **Environmental Impact**

Refers to a products or mteraisl effect on the outdoor environment. Select materials that minimize negative impacts on the ozone and add to global warming thru chemical release as well as minimizing release of toxic waste.

### ***Requirements and Recommendations:***

1. Mariposa will be creating a recycling center or area, which all builders will be required to participate.
2. Any excess materials should be taken to this center or reused on site.
3. For foundations consider using concrete containing recycled waste such as fly ash or aggregate, autoclaved cellular concrete (ACC), or insulating concrete forms (ICF). All contain recycled materials or require fewer materials to produce the product.
4. For walls and floors, consider using engineered lumber, light gauge steel framing, structural insulated panels (for roofs and walls) and insulating concrete forms (ICF). Some contain recycled materials while others are more energy efficient.
5. Incorporate the use of engineered wood trim and recycled plastic lumber into the house design.
6. Use low Volatile Organic Compound (VOC) materials such as caulk, sealant, glue, tape and other related products.
7. Use insulation types that either contain recycled materials or have a very high R-value.
8. For finishes, use low or no VOC paints, low VOC water based wood finishes, natural paint or finishes such as clay.
9. The Carpet and Rug Institute has established a Green Label testing program to set standards for Low VOC materials used to produce carpets, cushions and adhesives. Install carpets that only meet or exceed these standards.
10. Install carpets and cushions that contain recycled materials.
11. Install long lasting and sustainable flooring such as cork, natural linoleum or bamboo.

## **FINAL NOTE**

Again, while many of these items and issues discussed, are suggestions and recommendations, not requirements, the Founder strongly encourages every Developer/Builder and Owner to incorporate as many as they can into the construction of their homes.

Green building is more than just selecting a few materials or techniques to use. It is a whole system approach. One of the keys to green building is evaluating each step in balance with all the considerations and techniques.

## **RESIDENTIAL STRUCTURED WIRING**

*To assure that residents of Mariposa always have access to the latest communication technology, High Desert Investment Corporation, the master developer of Mariposa, referred to as Founder in these guidelines, plans to have an optical fiber-to-the-home (FTTH) network installed to every home in the community. This opportunity is unique in the region and will help distinguish the community from others. The FTTH network will deliver high-speed broadband Internet connectivity, digital-quality and HDTV cable television, as well as local and long distance telephone services. The FTTH network will insure the communication needs of Mariposa are "future proofed." To make sure that Mariposa residents are positioned to take full advantage of this latest technology it is required that each residence be wired to meet certain minimum specifications. The Structured Wiring Specifications are set forth in this section of the Guidelines.*

## **INTRODUCTION**

In order to take maximum advantage of the FTTH telecommunications architecture HDIC has developed a residential structured wiring specification that must be adhered to by all property owners and homebuilders.

This specification does not represent a change to residential structured wiring, however it does require the installation of specific types of cable and hardware that will support the types of services to be delivered to each and every resident. An accomplished low-voltage structured wiring contractor licensed by the Construction and Industries Division of the State of New Mexico shall complete all wiring.

This section should be self-explanatory and includes the types of cabling and hardware to be used. Equivalent products are acceptable, however they must meet the technical standards. In all cases, a single manufacturers product shall be used throughout an individual residential installation.

## **RESIDENTIAL STRUCTURED WIRING SPECIFICATION**

### **Scope**

This document describes the products and execution requirements relating to furnishing and installing Telecommunications Cabling for all homes constructed in Mariposa.

The Outlet Cabling System of each residential unit is based on the installation of (2) 4-pair Unshielded Twisted Pair (UTP) DATA (Enhanced Category 5-e rated) Copper Cables and (1) coaxial cable (RG-6 / series 6).

The Structured Wiring Distribution Center is based on the installation of an enclosure equipped with punch down telephone modules, patching modules with cables, and passive video splitter/combiner.

Jacks and connectors are based on the installation of Cat 5e RJ45 connectors, F-connectors, and appropriate wall plates.

Installation of one 1 ¼" underground conduit with pull wire from the outside telecommunications demarcation point located adjacent to the power meter to the closest curbside telecommunications connection point.

Installation of one 1 ¼" flexible conduit with pull wire from the telecommunications demarcation point to the structured wiring distribution center.

Installation of a 110-volt 2-gang AC power outlet located 4" below the structured wiring distribution center.

The electrical contractor must ground the Structured Wiring Distribution Center with standard gauge grounding wire, in accordance with National Electric Code or superseding local codes.

The work to be included under this specification consists of furnishing all labor, equipment, materials, and supplies and performing all operations necessary to complete the installation of a complete residential structured wiring system. The builder will provide and install all of the required material to form a complete system.

### **Regulatory References**

All work and materials shall conform in every detail to the rules and requirements of the National Fire Protection Association, the local Electrical Code and present manufacturing standards.

All materials shall be listed by UL and shall bear the UL label. If UL has no published standards for a particular item, then other national independent testing standards shall apply and such items shall bear those labels. Where UL has an applicable system listing and label, the entire system shall be so labeled.

The cabling system described is derived from ANSI/TIA/EIA-570-A Residential Telecommunications Cabling Standards

This document does not replace any code, either partially or wholly. The builder must be aware of local codes that may impact this project.

### **Pre-Wire Specifications**

1. All wires must be homerun, video and telephone from wall plates to the structured wiring distribution center per the TIA-570 wiring specification.
2. Mud rings to be installed at same height as boxes for duplex receptacles.
3. Mud ring for wall phone outlet to be installed 52" off of floor.
4. Cable holes in studs and joists must be drilled to at least 1" in diameter. Appropriate size grommets must be used in all metal stud applications to prevent cable damage.
5. Both ends of cables must be tagged and identified. Leave 16 inches of excess cable in enclosure for each cable run.
6. DO NOT EXCEED MAXIMUM BEND RADIUS OF 3" FOR CAT 5e & coaxial cables.
7. DO NOT EXCEED 25lbs OF PULLING FORCE to avoid compromising the integrity of the cable.
8. Use plastic cable straps and cable staples – DO NOT USE METAL CABLE STAPLES OR STAPLE GUNS.
9. Roll all cable runs, not compromising the 3" rule, and secure to mud-ring.
10. In order to support the quality and integrity of the "structured wiring system", the Cat5e and RG-6 cables need to be installed at least one stud cavity away from power wires. When the low voltage wiring needs to cross a power cable, it should do so at a right angle to minimize interference.

## **Structured Wiring Distribution Center**

Each residential unit will have a Structured Wiring Distribution Center. The distribution device must be 14 ¼" wide, at least 4" deep and 20" high to accommodate all of the cables and panels required. The distribution center shall provide a central distribution point and be able to support voice, data, and cable TV and shall:

1. The Structured Wiring Distribution Center enclosure is to be recessed on center of 16" studs.
2. Bottom edge to be 60" above floor.
3. Grommets must be installed in panel to prevent cable damage.
4. Install (1) single-gang mud ring in the same stud bay as the enclosure. Mounting height should be 4" below the enclosure.
5. Have a knock out to accommodate AC power requirements.
6. Coaxial cables must be routed through the enclosure's (2) right top cable entry holes, CAT 5e cables to be routed through the top left cable entry holes.
7. Include an incoming service panel for service termination.
8. Include a voice & data panel for distribution of outgoing services for bridged (voice) and non-bridged (data) connections.
9. Have internal mounting hole pattern that is universal such that modules with size multiple of 1.75" (as per EIA/TIA 310D standard) may be mounted.
10. Be mountable in a standard stud cavity (16" on center) or surface mountable.
11. Have cable entry holes top and bottom.
12. Have mounting depth guides for proper drywall alignment.
13. Be constructed of 20-gage steel for overall rigidity.
14. Have extensive use of internal slots for hook & loop and /or cable ties for optimum cable and wire management.
15. Have snap-in cable bushings to protect twisted pair, coaxial and fiber optic cables.
16. Have an oversized cover to cover up any sheetrock imperfections or rough edges.
17. Have an easily removable cover, for access to internal components.
18. Be lockable to provide a secure environment for internal components.
19. Meet UL requirements for low voltage distribution centers.
20. Be manufactured by an ISO 9001 registered company.
21. The Structured Wiring Distribution Center shall be a maximum of 300 feet away from the telecommunications demarcation point adjacent to the power meter box on the outside of the house.

## **Equivalent Products**

All products selected by the builder for installation, including but not limited to enclosures, faceplates, jacks, panels, racks, cabinets, patch cords and modules, for the purpose of this document shall be from a single manufacturer to insure the integrity of the residential structured wiring system specific to each residential unit. The same manufacturers Cat 5e wiring and RG 6 coaxial cable shall be used throughout each residential unit.



## **PROCEDURES FOR PLAN REVIEW**

*In order to assist each Developer/Builder in planning and designing Neighborhoods and homes, to help insure compliance with these guidelines, and to take full advantage of the unique opportunities at Mariposa, a comprehensive design review process administered by the Founder has been established.*

*The Founder has exclusive jurisdiction over all residential construction in Mariposa and requires compliance with these Guidelines.*

## **DESIGN REVIEW PROCEDURES**

The design review process was developed to provide adequate checkpoints to minimize time and money spent on residential designs, which may not adhere to the Guidelines, or to the overall philosophy of Mariposa and to guide and educate Developer/Builders relating to the Guidelines and the philosophy through the design review process. Thus, helping insure that all projects comply with the philosophy and Guidelines.

Each Neighborhood within Mariposa will process their house plans in one of two ways. The Developer/Builder will either obtain a "one-time" approval for specific models from the Founder or each individual house plan must be submitted to the Founder for review and approval. This section will discuss the process for both.

## **SUPPLEMENTAL GUIDELINES**

A Developer/Builder of a Neighborhood may have Supplemental Guidelines to address design criteria, restrictions or, requirements that may be exclusive to that specific Neighborhood. The Founder must approve any Supplemental Guidelines. A separate review committee comprised of the original Developer/Builder may be formed to enforce these Supplemental Guidelines. This committee must approve all plans in writing prior to review by the Founder. This applies to the original construction. Any modifications, after original construction, may either be reviewed or delegated by the Founder, to a Modification Committee that will have sole responsibility for review and approval of such modifications.

## **BUILDER APPROVAL**

All Builders must sign a Mariposa Master Builder Agreement and be approved by the Founder.

## **BUILDER DEPOSIT**

A deposit of \$4,000 must accompany the Master Builder Agreement for each Builder. The \$4,000 is considered a construction deposit that can be used, or a portion of, for construction regulation violations, as described in the Construction Regulation section of these Guidelines. This deposit is assigned to the Builder not an individual home. The Builder is required to replace any portion of the \$4000 that may have been used. The deposit will remain with the Founder until the Builder decides to no longer build in Mariposa. Once the builder requests return of the deposit, their name will be removed from the "Approved Builder List". If they wish to build in the future, the steps above must be repeated.

## **PRE APPROVED MODELS**

A Developer/Builder may choose to have all of their model and style elevations approved in advance. Thus, those homes will not require individual approval. A pre-design meeting will be held with the Founder and the Developer/Builder will present all the proposed models and subsequently must inform the Founder of the selected model for each lot.

The proposed materials, colors and different elevations must also be presented. If there are any changes or modifications to the exterior of the approved plans, the Founder must approve these changes prior to any installation or construction of those changes.

## **INDIVIDUAL HOUSE PLANS**

Individual house plans must be submitted if they are not a pre-approved model, are a deviation of a pre-approved model, or if the house is being constructed by a Builder other than the original Developer/Builder. The submittal must include all of the requirements listed below except the landscape plan must be specific to the lot and based on the conceptual landscape plan. Also the Builder is responsible for complying with any Supplemental Guideline requirements and restrictions as well as processing the plans through any separate review committee (if applicable) prior to submittal to the Founder. If there are any changes or modifications to the exterior of the approved plans, the Founder must approve these changes prior to any installation or construction of those changes.

## **PLAN REVIEW**

*Plan Review Submittals shall include:*

1. **TWO reduced (11" X 17") sets will be submitted to the Founder.**
2. **Floor and Roof Plans: Show areas of flat and sloped roofs and all roof mounted equipment such as air conditioning units, solar panels, skylights, etc.**
3. **Building Elevations: Must include all four elevations. Must show massing, exterior materials and colors as well as all dimensions and heights of parapets or roof ridge lines.**
4. **Electrical Plan: Must show the location, number, style and type of all exterior light fixtures whether building mounted, recessed, ceiling, or any other type.**
5. **Structured wiring requirements must also be identified on the electrical plan (see Structural Wiring section of these Guidelines for more detail).**
6. **Site Plan: Must show the approved finished pad elevation, driveway and walkway locations, wall locations and dimensions. The required building setbacks must be included.**
7. **Conceptual Landscape Plan: Must show a conceptual design of the front yard. Must include locations, sizes, quantities and species of plant materials as well as type and size of ground cover materials. This plan will be used to review the front yard landscaping for each lot.**
8. **Any standard notes, based on Guideline requirements, established by the Founder.**

## **SUBMITTAL OF REVISED DRAWINGS**

Founder comments regarding the plans will be marked on one set and returned to the Developer/Builder. Once the changes have been incorporated into the plans, the Developer/Builder

must re-submit two revised sets, along with the marked set, for review by the Founder.

## **PLAN APPROVAL**

Once the Founder has approved the plans, the reduced sets will be stamped "Approved". One of those sets will be returned to the Developer/Builder and the other will remain in the Founder's file.

## **BUILDING PERMIT**

Builder must have plans approved by the Founder and separate review committee (if applicable), prior to building permit submittal. After approval by the Founder, the Developer/Builder is responsible for securing a building permit from the City. Construction must be in accordance with the Founder approved plan and all applicable governmental rules and regulations. If the City of Rio Rancho requires any changes to the Founder "Approved" plans, the Developer/Builder must inform the Founder.

## **VARIANCE FROM GUIDELINES AND PROCEDURES**

The Charter provides that the Founder may authorize a variance from any of the Guidelines and procedures when there are special circumstances. The brief description and notice of variance issues in these Guidelines is not intended to replace the Rules and Regulations for granting a variance. It is intended only to put the reader on notice that a variance procedure is in place. For additional information you should review the Rules and Regulations for "Granting A Variance".

### ***Requirements and Recommendations:***

1. Rules and Regulations for granting a variance may be obtained from the Founder.
2. A variance can only be granted when, in the sole and absolute opinion of the Founder, a unique circumstance dictates.
3. A variance can only be granted when circumstances such as topography, natural obstructions, hardship, aesthetic or environmental considerations exist/apply.
4. Granting of variances is not lightly undertaken by the Founder. It is strongly suggested that applications for a variance by an owner only be considered under extreme circumstances.

## **ENFORCEMENT**

During the course of construction, the Founder or designee will enforce all of the restrictions and requirements of the Guidelines as well as ensuring that the home is built in substantial compliance with the Founder approved plans.

## **NONWAIVER**

Any approval by the Founder of drawings or specifications, work done or proposed, or in connection with other matters requiring approval under these Guidelines or the Charter, including a waiver by the Founder, shall not be deemed to constitute a waiver of the right to withhold subsequent approval. An oversight by the Founder of non-compliance at anytime during the review process, construction process or during the final inspection, does not relieve the Developer/Builder from compliance with the Guidelines, the Charter and all other applicable codes, ordinances and laws.

## **CONSTRUCTION REGULATIONS**

*To assure that the intent of these Guidelines are incorporated into the building process and that the natural landscape of Mariposa is not unduly damaged during construction, the following Construction Regulations shall be a part of the contract documents. The Founder will conduct a monitoring program during the course of any construction to assure that building is proceeding in accordance with the Guidelines.*

## **MARIPOSA BUILDER PROGRAM**

Each Builder must be approved to build in Mariposa. This approval includes the execution of a Master Builder Agreement and the submittal of a \$4,000 builder deposit as assurance of their intent to comply with the provisions of these Guidelines.

## **CONSTRUCTION REVIEW**

The Founder can inspect work in progress. Each construction site will be monitored to ensure the regulations are followed. Any evidence of non-compliance with the Guidelines will be communicated to the Developer/Builder immediately.

## **CONSTRUCTION REQUIREMENTS**

### **Occupational Safety and Health Act Compliance (OSHA)**

All applicable OSHA regulations and guidelines must be strictly observed at all times. However, the Founder is not responsible for enforcing OSHA regulations.

### **Construction Trailers, Portable Field Offices, Etc.**

Any Developer/Builder who desires to place a construction trailer, field office, or the like, within the neighborhood, shall obtain written approval from the Founder by submitting a copy of a site plan with proposed locations. Temporary structures must be removed upon completion of construction.

### **Sales Office/Trailer**

A Developer/Builder may desire to either locate a temporary sales office on the tract or use a model as a sales office on site. Plans for a sales trailer must be submitted for Founder approval and must include location, size, access, parking, and any other pertinent information required by the Founder. If a model home is used, the Developer/Builder should inform the Founder of the location and parking configuration.

### **Fencing**

To protect the Natural Area and Open Space of a lot from damage during construction, the Founder may require a fence, at least six feet high, to be installed to enclose the construction area. During construction, Neighborhoods must be fenced in accordance with the SWPPP requirements.

### **Disturbance Of Natural Areas**

Many of the Neighborhoods are surrounded by Natural Areas and Open Space that are to remain natural, except for drainage infrastructure or pedestrian trails that are approved and shown on the construction plans. The Founder must approve any proposed construction within these areas prior to start of construction. Upon completion of the construction any disturbed areas must be restored to their natural state.

### **Debris And Trash Removal**

Developer/Builder is responsible for neat and clean maintenance of the construction site.

**Requirements and Recommendations:**

1. Developer/Builders shall clean up all the trash and debris on the construction site to maintain a neat and clean appearance. Trash and debris shall not be allowed to accumulate.
2. Developer/Builders must immediately clean up trash and debris that has blown from their job site onto adjacent lots or Natural Areas/ Open Space.
3. Lightweight materials, packaging, and other items shall be covered or weighted down to prevent their being blown off the construction site.
4. Temporary concrete "wash pits" must be in approved locations within the construction site and cleaned after completion of construction.
5. Unightly dirt, mud, or debris from activity on construction site and on the adjacent public street must be promptly removed and the general area cleaned up.
6. Fuels, lubricants and other petrochemicals must be stored outside of the 100-year flood plain and any Lateral Erosion Envelope (LEE) line. Protect against construction equipment leaks or discharges of fuels or lubricants in the riparian ecosystem. Contain petrochemical spills including contaminated soil and dispose of it properly.
7. Developer/Builders are prohibited from dumping, burying, or burning trash anywhere in Mariposa except as expressly permitted by the Founder.
8. During construction, each construction site and the route to and from the construction site shall be kept neat and clean and shall be properly policed to prevent a public eyesore.

**Stormwater Pollution Prevention**

The Developer/Builder must prepare and implement an EPA Storm Water Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) for Storm Water Discharges associated with construction activity under a National Pollutant Discharge Elimination System (NPDES) general permit.

**Requirements and Recommendations:**

1. Under the provisions of the Clean Water Act, federal law prohibits storm water discharges from certain construction activities to waters of the United States unless that discharge is covered under a NPDES permit.
2. You may obtain additional information regarding NPDES and submit your NOI electronically at: [www.epa.gov/npdes/stormwater/cgp](http://www.epa.gov/npdes/stormwater/cgp) or telephone the Storm Water Notice Processing Center at 866-352-7755.
3. The Founder has no responsibility for review, approval or maintenance of individual SWPPP's, but will require implementation of "Best Management Practices" (BMP) to minimize storm water pollution during construction.

**Recommendations for BMP's:**

- a) Silt Fence at appropriate areas
- b) Rock cobble pads at drive connections to streets
- c) Installed temporary or permanent drainage ponds and facilities
- d) Hay bales at appropriate areas
- e) Rock cobble dams at appropriate areas
- f) Trash containers and frequent trash removal
- g) Concrete washout pits
- h) Protection devices utilizing BMP's to control runoff or erosion from arroyos or streets
- i) Protection of trees and major shrubs
- j) Street sweeping as required

4. Job sites need to have all permits properly posted to comply with EPA requirements.
5. Developer/Builder is responsible for compliance with EPA regulations, including inspection and record keeping related to the SWPPP.
6. Non-compliance with EPA and SWPPP requirements is subject to fines by the EPA and Founder, as provided in these Guidelines.

### **Recycle Of Construction Materials**

Founder intends to establish a program for the recycling of construction materials and Developer/Builder shall cooperate with such a program.

### **Dust And Noise Control**

The Mariposa community must be protected from dust and noise arising from construction activities.

#### ***Requirements and Recommendations:***

1. Developer/Builder shall maintain a program of dust and erosion control at all times during construction and until cut and fill areas are stabilized and planted areas established.
2. The Developer/Builder shall be responsible for controlling dust and noise, including, without limitation, music from the construction site in accordance with all governmental regulations and ordinances pertaining to noise and blowing dust.
3. Special precautions to prevent blowing dust must be taken during windy periods as well as weekends.
4. Developer/Builder must comply with all City of Rio Rancho requirements and Best Management Practices (BMP) as described under the Stormwater Pollution Prevention section of these Guidelines.

### **Sanitary Facilities**

Each Developer/Builder shall be responsible for providing adequate on-site sanitary facilities.

#### ***Requirements and Recommendations:***

1. Portable toilets or similar temporary toilet facilities shall be located only within the construction site unless the Founder approves an alternate area.

### **Vehicles And Parking Areas**

Each Developer/Builder shall be responsible for its subcontractors and suppliers.

#### ***Requirements and Recommendations:***

1. Adhering to the speed limits and traffic regulations posted within the development shall be a condition included in the contract between the Developer/Builder and its subcontractors/suppliers. Repeat offenders may be denied future access to Mariposa by the Founder.
2. The Founder may impose fines against the Developer/Builder and/or the Builder deposit debited for violations.
3. Construction crews shall not park, turn around on, or otherwise use, other lots, unless owned by the Developer/Builder. Under no circumstances shall construction crews trespass on Open Space.



4. Private vehicles, construction vehicles and machinery shall be parked only within the construction site or in areas designated by the Founder.
5. All vehicles shall be parked in a manner not to inhibit traffic.
6. Any disturbance outside the construction site from construction vehicles must be restored immediately.

### **Excavation Materials**

Excess excavation materials must be hauled away from Mariposa at the time of excavation and not stored on the site, unless approved by the Founder.

### **Blasting**

The Founder does not anticipate blasting will be necessary. However, if blasting is needed, the Founder must be informed in advance and in writing by expert consultants to make sure that the blasting may be accomplished safely.

#### ***Requirements and Recommendations:***

1. No blasting or impact digging causing seismic vibrations may be undertaken without the approval of the Founder based upon such advice from a qualified consultant.
2. Applicable governmental regulations concerning blasting must be observed and all required permits obtained.
3. The Founder's only responsibility is to require evidence of such consultant's expertise; therefore the Founder shall have no liability for the blasting.

### **Restoration/Repair of Damage To Other Property**

#### ***Requirements and Recommendations:***

1. Damage and scarring to any property, open space or other lot, including, but not limited to roads, driveways, concrete curbs, gutters, utilities, vegetation and/or other improvements, resulting from construction operations, will not be permitted.
2. If damage occurs, it must be repaired and/or restored promptly and any resulting expenses are the responsibility of the Developer/ Builder.
3. If a Developer/Builder or subcontractor causes any damage to the streets, landscaping, walkways or walls, the responsible party must rectify it immediately.

### **Construction Signage**

All signs at Mariposa will conform to a unified standard prescribed by the Founder.

#### ***Requirements and Recommendations:***

1. Only one construction sign will be allowed per lot.
2. Construction signs may convey the general contractor's and/or architect's identification name, logo, and telephone number.
3. The Builder at the completion of construction shall remove construction signs.
4. No other signs (i.e. subcontractors, material suppliers) are permitted on the lot.

5. No banners, flags, balloons, etc., are permitted, except for temporary special events and must be approved by the Founder.
6. Signs must conform to the requirements of the City of Rio Rancho.

### **Miscellaneous and General Practices**

All Developer/Builders will be responsible for the conduct and behavior of their agents, representatives, builders, contractors, and subcontractors while on the premises of Mariposa.

#### ***Requirements and Recommendations:***

1. No changing oil on any vehicle or equipment on the site itself or any other location within Mariposa, unless the Founder designates a location for that purpose.
2. No concrete suppliers, plasterers, painters, or any other subcontractors are allowed to clean their equipment anywhere but the location specifically designated, if any, for that purpose by the Founder.
3. Any inadvertent, or intentional spills, washouts of concrete, plaster, paint, etc. must be cleaned immediately. This includes spills on streets or right-of-ways.
4. Removing rocks, plant material, topsoil, or similar items from any property of others within Mariposa, including other construction sites, is prohibited.
5. Carrying any type of firearms within Mariposa is strictly prohibited.
6. Using disposal methods or equipment other than that approved by the Founder is prohibited.
7. No disposing carelessly of cigarettes and other flammable material. At least one 10- pound ABC rated dry chemical fire extinguisher shall be present and available in a conspicuous place on the construction site at all times.
8. Fires of any type including campfires and burning of waste material or trash is prohibited.
9. Damage to or removal of protected plants or plant materials (not previously approved for removal by the Founder) is prohibited.
10. Disposing of trash or any other material on any lot, Natural Areas/Open Space or any other property in Mariposa is prohibited.
11. Bringing pets (particularly dogs) into Mariposa by construction personnel is not allowed. In the event this request is ignored, the Founder shall have the right to contact impounding authorities. The Founder may refuse to let the Builder or subcontractor continue working or to take action as may be permitted by law, by these Guidelines, or the Charter.

### **Preservation Of Cultural Sites**

A detailed archaeological survey has been conducted for Mariposa East. The land plan and platting for Mariposa East has fully investigated known cultural sites or avoided them, therefore no additional cultural investigation should be necessary. If any cultural sites are found during construction, contact the Founder immediately and construction must stop in that area.

***Developer/Builder shall not undertake any of the activities listed below without prior written approval of the State of New Mexico Historic Preservation Division and the Founder:***

1. An activity, which directly or indirectly jeopardizes the physical integrity of a cultural site that may be discovered during construction, is prohibited.
2. Removal of artifacts, structures or other items associated with a cultural site is strictly prohibited.

## **COMMENCEMENT OF CONSTRUCTION**

Once the Founder has approved plans, the Developer/Builder must begin construction within one year and substantially complete construction one year thereafter.

## **DAILY HOURS OF OPERATION**

Daily working hours for each construction site shall be from 30 minutes before sunrise to 30 minutes after sunset unless the Founder designates other hours in writing.

## **INSPECTIONS**

The Founder may require an inspection of the electrical/structural wiring when it is roughed in and upon completion of wiring.

The Founder may review the site throughout construction and will notify the Developer/ Builder of any inconsistencies or potential violations. These must be rectified immediately.

The Developer/Builder will notify the Founder of completion of construction. The Founder will inspect the site including improvements for compliance with the Founder approved plans within 15 days of such notice. The Founder shall notify the Developer/Builder in writing of any violations or inconsistencies with the approved plans. The Developer/Builder shall remedy these noncompliances within 30 days of receipt of the notification. If the issues have not been rectified in that time period, the Founder may take action as outlined in the Mariposa Charter.

## **ENFORCEMENT**

The Founder has the power to impose reasonable fines, which shall constitute a lien upon the unit of the violator in addition to other rights, which are specifically granted in these Guidelines, in the Charter and in the By-Laws of the Association. A list of fines may be obtained from the Founder. The Founder may retain the construction deposit until all violations are cured or apply it to cure violations and satisfy outstanding fines.

Any structure (or improvement) placed or made in violation of the Charter and the Guidelines shall be deemed to be nonconforming. Upon written request from the Founder, the Developer/Builder shall remove such structure (or improvement) at his own expense. The land must then be restored to substantially the same condition as existed prior to the nonconforming work. Should a Developer/Builder fail to restore as required, the Founder or its designees shall have the right to enter the property, remove the violation and restore the property to its original state.

The Founder may exclude any contractor, subcontractor, agent, employee, or other invitee of a Developer/Builder who fails to comply with the terms and provisions of the Guidelines.

## **NONWAIVER**

Any approval by the Founder of drawings, specifications or work done, proposed or in connection with other matters requiring approval under these Guidelines or the Charter, including a waiver by the Founder, shall not be deemed to constitute a waiver of the right to withhold subsequent approval. An oversight by the Founder of non-compliance at anytime during the review process, construction process or during its final inspection, does not relieve the Developer/Builder from compliance with these Guidelines and all other applicable codes, ordinances and laws.

