FINAL ENVIRONMENTAL IMPACT REPORT

GUENOC VALLEY MIXED USE PLANNED DEVELOPMENT PROJECT

VOLUME III APPENDICES

JUNE 2020

LEAD AGENCY:

Lake County Community
Development Dept.
255 N Forbes St # 330
Lakeport, CA 95453

FINAL ENVIRONMENTAL IMPACT REPORT

GUENOC VALLEY MIXED USE PLANNED DEVELOPMENT PROJECT

VOLUME III APPENDICES

JUNE 2020

LEAD AGENCY:

Lake County Community
Development Dept.
255 N Forbes St # 330
Lakeport, CA 95453

PREPARED BY:
Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
www.analyticalcorp.com

TABLE OF CONTENTS

Volume III APPENDICES

Appendices printed in gray text (AIR-WW) are attached to the Draft EIR dated February 2020 and are electronically available at http://www.lakecountyca.gov/Government/Directory/Community_Development/Planning/GuenocValley.htm or by written request. Appendices printed in black text (DG-WRA) are attached to this Final EIR.

Appendix AIR	Air Quality Modeling and Calculations
Appendix BRA1	Phase 1 Biological Resources Assessment
Appendix BRA2	Future Phases Biological Resources Assessment
Appendix BRA – Middletown	Middletown Housing Site Biological Resources Assessment
Appendix CCWD –	Callayomi County Water District Will Serve Letter
Appendix CP	Construction Implementation Plan
Appendix CULT	Cultural Resources Study Information (confidential information removed)
Appendix DG	Draft Design Guidelines
Appendix EDR	EDR Report
Appendix ELEC	Electrical System Feasibility Report
Appendix FIRE	Guenoc Valley Wildfire Prevention Plan
Appendix GEOTECH	Preliminary Geotechnical Study Report
Appendix GPCT	General Plan Consistency Table
Appendix GRADING	Earthwork plan
Appendix GVD	Proposed Guenoc Valley District (GVD) Zoning District
Appendix IS	Initial Study
Appendix NOISE	Traffic Noise Memorandum
Appendix NOP	NOP Comment Letters
Appendix OAK	Oak Mitigation Plan
Appendix OSPP	Amendment to Open Space Preservation Plan
Appendix SCA	Middletown Sewer Capacity Analysis
Appendix SPOD	Specific Plan of Development for Phase 1
Appendix STORMMID	Stormwater Design Report Middletown
Appendix SW	Stormwater Design Report
Appendix TIA	Traffic Impact Analysis
Appendix WATER	Water Demand Technical Memo and Water Infrastructure Plan
Appendix WD	Aquatic Resource Delineation Report – Guenoc Valley Site
Appendix WD-Middletown	Wetland Delineation Middletown Housing Site
Appendix WSA	Water Supply Assessment
Appendix WW	Wastewater Feasibility Study

Revised Appendix DG	Draft Design Guidelines
Revised Appendix FIRE	Guenoc Valley Wildfire Prevention Plan
Revised Appendix OAK	Oak Mitigation Plan
Revised Appendix OSPP	Amendment to Open Space Preservation Plan
Revised Appendix SPOD	Specific Plan of Development for Phase 1
Appendix ATTM	Air Transportation Technical Memo
Appendix BOHN	Upper Bohn Lake Recreation Operation Plan
Appendix TDM	Transportation Demand Management Plan
Appendix WILDLIFE	A systematic review of habitat connectivity as proposed in the Guenoc Valley Mixed Use Project in relation to in the Mayacamas to Berryessa (M2B) Connectivity Network Report (M2B 2018)
Appendix WRA	WRA Response to comments Memorandum

REVISED APPENDIX DG

DRAFT DESIGN GUIDELINES

MAHÁ

GUENOC VALLEY

DESIGN GUIDELINES
FOR THE FIRST PHASE OF THE
MAHA RESORT AT GUENOC VALLEY

June 9, 2020

TABLE OF CONTENTS

TABLE OF CONTENTS 2

SECTION 1 INTRODUCTION 4
1.1 Context & History 4
1.2 Design Philosophy & Objectives 4
1.3 Purpose & Intent 5
1.4 Landscape & Development Zones 5
1.5 Definitions 6

SECTION 2 OPEN SPACE & AGRICULTURAL GUIDELINES 8
2.1 Existing Landscape Context 8
2.2 Open Space 8
2.2.1 Rural Landscapes 8
2.2.2 Dedicated Open Space 8
2.3 Agriculture 8
2.3.1 Grazing Practices 9
2.3.2 Vineyard Practices 9

SECTION 3 CIRCULATION & GENERAL SITE DESIGN GUIDELINES 10
3.1 Roadway & Pathway Landscape Corridors 10
3.2 Roadways & Parking 10
3.2.1 Roadway Design 10
3.2.2 Setbacks 10
3.2.3 Parking Lots 11
3.2.4 Special Event Parking 11
3.2.5 Driveways 11
3.2.6 Paving Materials 12
3.3 Pathways & Trailways 12
3.4 Site Features 12
3.4.1 Walls, Fences, & Gates 12
3.4.2 Retaining Walls 12
3.4.3 Fencing 13
3.4.4 Gates 13
3.4.5 Signage 14
3.4.6 Lighting 16
3.4.7 Recreational Areas, Structures, & Furnishings 16
3.4.8 Outdoor Artwork, Monuments, & Landmarks 17
3.4.9 Accessory & Utility Structures 17

SECTION 4 RESIDENTIAL ARCHITECTURAL DESIGN GUIDELINES 18
4.1 Residential Typologies 18
4.2 Height 18
4.3 Lot Coverage & Density 19
4.4 Massing & Scale 19
4.5 Setbacks 19

4.6 Building Materials & Criteria 20
4.7 Porches & Decks 20
4.8 Roofs & Rooflines 20
4.9 Exterior Fire Suppression Systems 21
4.10 Photovoltaic Panels 21
4.11 Exterior Building Lighting 22
4.12 Accessory to Residential 22

SECTION 5 RESIDENTIAL LANDSCAPE DESIGN GUIDELINES 23
5.1 Residential Landscape Design Objectives 23
5.2 Vehicular Access & Parking 23
5.3 Pools & Water Features 23
5.4 Pool Decks, Courtyards & Terraces 23
5.5 Walls, Fences & Gates 24
5.6 Residential Fences 24
5.7 Recreational Amenities 24
5.8 Planting Selection & Design 25
5.9 Residential Vineyards 25
5.10 Irrigation & Water Conservation 26
5.11 Wildfire Prevention 27
5.11.1 Determine Total Defensible Space and Defensible Zones 27
5.11.2 Prepare Site by Removing & Reducing Flammable Vegetation 28
5.11.3 Establish New Landscape and Site Design 28
5.11.4 Implement Additional Strategies 29
5.11.5 Manage Landscape to Reduce Risk 29
5.12 Exterior Service Areas 30
5.13 Landscape Structures & Furnishings 30
5.14 Landscape Lighting 30
5.15 Outdoor Artwork & Monuments 31
5.16 Address Markers 31

SECTION 6 IMPLEMENTATION PLAN 32
6.1 Applicability & Use 32
6.2 Conformance with Design Guidelines 32
6.3 Maintenance & Enforcement 32

APPENDICES 33
Appendix A: Recommended Plant Palette List 33
Appendix B: Fire-Prone Plant List 40
Appendix C: Design Guidelines Checklist 42

SECTION 1 INTRODUCTION

1.1 Context & History

The vision for the Maha Resort at Guenoc Valley ("Resort") is that of a destination resort of unparalleled luxury, featuring internationally acclaimed architect-designed boutique hotels with products and amenities from local artisans and farms, providing a luxurious experience within the scope of a master-planned mixed-use development.

The new zoning designation, Guenoc Valley District ("GVD"), includes proposed development standards outlined in the draft zoning ordinance section. These are consistent with the County's existing Commercial and Residential Planned Development zoning designations as requested by the Area Plan. The proposed Entitlements utilize the Planned Development process for the long-term growth of the Resort. This recognizes efficient land utilization and preservation of open space in conjunction with fire- safe measures already required by the State and County Fire Safe Regulations. It also includes measures that the Resort proposes in the Maha Guenoc Valley Wildfire Prevention Plan.

The Resort adheres to the framework of the existing Lake County land use policies and goals as defined by the General Plan and more importantly the specific plan for this area as defined by the Middletown Area Plan ("Area Plan"). As directed by the Area Plan, the Guenoc Ranch will be rezoned to accommodate planned resort development. The planned development will be designed as mixed-use, comprising resort, resort commercial, residential, and agriculture as previously anticipated in the Area Plan.

Maha reflects the area's local stewardship, historic retreat culture and longstanding agricultural traditions. The proposed development features low-impact development as one tool to preserve the legacy and identity of the ranch for future generations. The master plan will incorporate land management practices that support open space preservation with an integrative animal husbandry and diversified agriculture element along with fuel reduction management.

1.2 Design Philosophy & Objectives

These Design Guidelines provide a set of criteria to evaluate the appropriateness of proposed development in relation to the vision, intent, and purpose of the GVD area to support the blend of resort, recreational, residential, and agricultural planned development.

The goal of these Design Guidelines is to help ensure the continuation of the vision and intent of the Special Study Area NO. 3 of the Middletown Area Plan through the implementation of the GVD. The vision for the GVD is grounded in high-quality design that exists in harmony with the natural environment of the diverse landscape of the Guenoc Valley and surrounding landscape. The concept of "listening to the land" dictated and resulted in the creation of an exclusive and innovative low-impact development connected to nature. The vision prioritizes the character of the site through landscaping, invisible infrastructure where feasible, and the design of individual architectural clusters that respond to the variety of the landscape visually and topographically.

Visiting or living within the GVD is about being connected to nature and its immense offerings

through outdoor recreation, authentic farmstead experiences such as farm-to-table dining, high end wine tastings, spa and wellness treatments, and luxury front-end service and amenities. It is the intention to attract guests and visitors to Lake County who are moved by, motivated by, and appreciative of the character of the environment. Development within the GVD shall abide by the vision of preserving the character of the landscape for both the present and future enjoyment of guests and owners.

1.3 Purpose & Intent

The following includes a series of guidelines which preserve the existing visual characteristics of the GVD and promote appropriate change and development. The focus of these Design Guidelines outline both the architectural and landscape expectations for future development within the GVD. These guidelines respond to and support the local land use policies such as the General Plan, The Middletown Area Plan, and specifically the GVD Zoning Ordinance ("Governing Documents").

The existing, as approved, Commercial Design Guidelines that govern the Middletown Area Plan recognize the importance of development in creating positive initial impressions and increase community pride and economic viability. However, they do not apply to the Special Study Area that includes the GVD. Therefore, as part of the GVD approval process the following are the proposed Design Guidelines for the GVD zoning district.

To fulfill the vision of a world-renowned brand offering a luxurious experience in an iconic natural setting demands uncompromising excellence in all regards. This extends into all design and planning, including plans for construction, operations, and maintenance. The Design Guidelines are one such method utilized to ensure the preservation of character, quality, and vision.

These Guidelines will be the reference document to guide the design of proposed future Specific Plan of Developments (SPOD), future residential development, which is located within the area of the GVD, and general planned development design characteristics.

1.4 Landscape & Development Zones

Refer to the SPOD application for the different existing and proposed landscape zones and development philosophies.

1.5 Definitions

American with Disabilities Act (ADA): Federal act prohibiting discrimination against persons with disabilities; in relation to the project, this act most often applies to the guarantee of accessible areas and structures.

Covenants, Conditions, & Restrictions (CC&Rs): An additional legal document applying a set of rules, responsibilities, and rights to each residential parcel.

Designated Open Space: Open space area protected from any development for the purposes of preserving wildlife corridors and rural landscapes; the only development allowed within this area is cross-over roadways, trailways, and small accessory structures.

Design Guidelines: The design guidelines and other provisions set forth in this document.

Emergency Vehicle Accessway: A route that provides access specifically for emergency personal and first responders.

Governing Documents: Existing documents that dictate the allowance and intention of development as it relates to the short- and long-term development goals. Conformance with the governing documents is disclosed in both the general and specific plans of development.

Guenoc Valley District (GVD): Section XXX of County of Lake Zoning Ordinance, a district comprising of 16,000 acres within the Guenoc Valley Planned Development Area.

Master Association: The association of owners governing the Resort.

Resort: Maha Resort at Guenoc Valley as described in Section 1.1 and throughout these Design Guidelines.

Public Viewshed: Parts of the site viewable from public roadways or public viewsheds.

Residential Accessory Use: A use conducted upon the same lot or parcel as the principal use or structure to which it is accessory. The use shall be customary, incidental, appropriate and subordinate to the use of the principal building on such lot or parcel; and uses accessory to principal residential uses permitted without first obtaining a use permit shall be activated with, or subsequent to the construction of the principal structure or activation of the principal use. Uses accessory to principal uses permitted by use permit shall be activated with, or subsequent to the construction of the principal structure or activation of the principal use only if authorized by the permit and, in such case, the addition of such accessory uses shall require either an amendment to the permit authorizing the principal use or a separate use permit.

Resort Rental Program: Voluntary rental program associated with transient occupancy.

Resort Residential Parcels: Parcels with residential structures within a primary resort community; the architectural style of these residential structures will align with the Resort community's design. These may be attached or detached units with kitchens; fractional or whole ownership. These parcels can be entered into the Resort Rental Program.

Rural Landscapes: Non-developed areas during the first phase of development; area may be

developed during future phases of development.

Special Event: An establishment or enterprise involving large assemblages of people or automobiles on private land not specifically designed for such events, including but not limited to spectator sport events, outdoor concert, wedding, etc.

Specific Plan of Development (SPOD): Application requirement for planned developments within the County of Lake, that are in substantial conformity with the previously approved general plan of development as well as any other governing documents.

Villa Residential Parcels: Larger parcels for sale within a primary resort community; owners will choose from typical floor plans associated with the resort community's architectural style.

Whole ownership units intended for sale that may be a part of the Resort Rental Program.

SECTION 2 OPEN SPACE & AGRICULTURAL GUIDELINES

2.1 Existing Landscape Context

The Resort is situated in a unique northern California landscape. The site's hills and valleys filled with oak woodlands, grasslands, vineyards, and grazing pastures will create an exceptional visitor and resident experience. The dramatic terrain—ranging from large fields and wetlands to steep and rocky hillsides—offers a variety of experiences and impressive views. A series of lakes, ponds, and reservoirs are filled by a site-wide network of streams and creeks. Over the years, a majority of the site has come to be used for a variety of agricultural operations, which includes a large cattle grazing operation; a portion of the site is also currently leased for vineyards. The site is set within a Mediterranean climate, defined by cool and rainy winters (30 - 60 degrees Fahrenheit) and hot and dry summers (50 - 90 degrees Fahrenheit).

2.2 Open Space

A majority of the Resort will remain as undeveloped natural and agricultural landscapes. These areas outside of parcels and development will provide an essential and unique experience and viewshed for residents and visitors. In addition, dedicated open space will be subject to long term conservation restrictions to prohibit development.

2.2.1 Rural Landscapes

The primary activities and development within rural landscapes will include hiking and walking trails, accessory structures (i.e. utility facilities and hiking stations), ecological restoration and enhancement, and landscape fire reduction management through grazing and manual vegetation removal (see *Maha Guenoc Valley Wildfire Prevention Plan* and 2.3.1).

2.2.2 Dedicated Open Space

The dedicated open space will be permanently protected from any future development for the purposes of maintaining a highly rich biological environment and protecting key wildlife corridors. Within this area, development will be limited to recreational amenities and features such as pathways and hiking trails (see 3.3), signage (see 3.4.2), lighting (see 3.4.3) and recreational areas, structures, and furnishings (see 3.4.5). Where necessary, the dedicated open space may also be ecologically enhanced and restored. This area will also be actively managed to reduce wildfire risk through ongoing grazing and manual vegetation removal, particularly non-native invasive species (see *Maha Guenoc Valley Wildfire Prevention Plan* and 2.3.1).

2.3 Agriculture

Cattle, sheep, and goat livestock grazing as well as agricultural crops, vineyards and operations shall be allowed features and activities within designated areas of the Resort.

2.3.1 Grazing Practices

Grazing has been a historic and long-term use of the Resort site. Cattle, sheep, and goat livestock grazing will continue with the Resort development; it will be an essential aspect of maintaining a rural lifestyle and aesthetic for residents and visitors while also serving a dual purpose of addressing wildfire risk (see *Maha Guenoc Valley Wildfire Prevention Plan*).

Livestock will be selectively and strategically moved between pastures in patterns and schedules necessary for livestock health and vegetation maintenance. All efforts will be made to minimize herd movements that present conflicts with resident and visitor experience and safety, traffic movement, and vineyard operations.

Grazing pasture fences and gates siting and material selection will support the best practices for livestock management while also being aligned with site-wide aesthetic objectives of utilizing consistent fencing types that blend and recede into the existing landscape while also allowing for wildlife movement (see 3.4.1).

Permanent and temporary barns will be strategically located throughout the site in order to provide structures necessary for supporting animal husbandry objectives.

2.3.2 Vineyard Practices

Vineyards will be oriented, planted, pruned, and maintained to create consistent, clean, and uniform appearance.

Vineyards shall be enclosed by fencing types that protect the crops from key pests while allowing for general wildlife movement. Vineyard fencing materials shall be consistent throughout the site; materials shall be permeable and visually recede into the landscape in order to retain views from commercial and residential sites (see 3.4.1).

SECTION 3 CIRCULATION & GENERAL SITE DESIGN GUIDELINES

3.1 Roadway & Pathway Landscape Corridors

Roadway and pathway corridors shall be designed to blend into the natural surroundings and feel like a rural country road highlighted by existing natural elements such as large trees or rock outcropping. A blend of complementary characteristic materials, elements, treatments, and landscaping will enrich each other to reinforce an overall cohesive site design character and aid in site navigation.

3.2 Roadways & Parking

3.2.1 Roadway Design

The Project is primarily served by two-way arterial roadways and two-way private roads and commercial drives. In addition to the main accessway, each individual parcel is accessed by driveways. Terminus of driveways which include cul-de-sacs and turnarounds will be engineered to comply with the minimum standards while maintaining the rural road feeling.

Roadways within the Resort shall be maintained by the Master Association or a sub-association in accordance with the CC&R's. Maintenance of roadways may include maintenance of vegetation to create fire breaks. Vegetation removal would be dictated by the Master Association and could be implemented at buildout of the subsequent residential or development area. Exceptions to County roadway standards will only be requested if a unique environmental feature is present or if it can be demonstrated that the proposed alternative provides safe access that is equivalent to County Standards.

3.2.2 Setbacks

Roadways and parking are designed to avoid permanent impacts to riparian areas to the greatest extent possible. Roadway work within riparian setbacks shall be limited and will adhere to all jurisdictional requirements. This includes the following minimum setbacks:

- Ephemeral Streams/20 foot Setback from the ordinary high water mark (OHWM)
- Intermittent Streams/20 foot Setback from top of bank (TOB)
- Perennial Streams/30 foot Setback from TOB
- Open Water/20 foot Setback from OHWM
- Wetlands/20 foot Setback from OHWM

In cases where riparian areas could be potentially impacted by roadways or driveways, these impacts shall be minimized through various measures such as designing bridges to free span streams to the greatest extent feasible in order to minimize aquatic barriers. In addition, permitting through the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Wildlife will result in measures that minimize riparian

habitat impact and the wildlife that depends on it throughout the project.

3.2.3 Parking Lots

Unenclosed parking areas provide for additional resident or guest vehicular storage. These areas should be well-integrated into the residential architectural and landscape design and anticipate all future parking needs for the site. Parking areas and drives shall provide adequate space for vehicular and designated fire vehicle turnarounds.

Parking areas shall be screened with trees or vertical screens as much as possible from any off-site roadway, residential, or resort views; if these areas are used for the purpose of long-term vehicular storage, the location shall be screened as necessary. Wherever feasible, these areas shall be shaded with trees, trellises, or other types of canopies.

At commercial and recreational areas parking spots shall be adequately provided to accommodate visitors, residents, and guests. A separate employee parking area will be located at the central back of house operations with the employee shuttle service and employee vehicles offered for circulation within the site. Parking shall be adequately provided in proximity to residential or commercial structures, however this shall not restrict options for clustered or centralized parking options if located within the vicinity. For official parking requirements please see the GVD Zoning Ordinance.

3.2.4 Special Event Parking

In the instance of special events cars will be parked by a professional valet service. No parking will impede Resort entrances, private gates, agricultural ranch road entrances, management areas, or within the emergency vehicle accessways.

3.2.5 Driveways

Driveways, driveway turnouts, driveway turnarounds, bridges, culverts, and unenclosed parking areas will all be allowed within the residential parcels and shall comply with Lake County Standards, unless an exception to the standard is requested.

Each residential parcel presents a variety of unique topographic, vegetation, and drainage conditions; these factors combined create specific opportunities and constraints for locating driveway routes on each parcel. Driveway design shall be rural in character and limit visual impacts to adjacent parcels and Resort amenities where feasible. Driveway alignments shall minimize grading, tree removal, and other disruptions to the site to the extent feasible. The necessity for vertical curbs and retaining walls shall be minimized as much as possible except to preserve trees or other features. Driveways shall minimize site disturbance, while still providing required access for emergency and service vehicles.

Shared driveways between multiple residential parcels shall be as narrow as allowed by code and may include turnouts for two-way vehicular flow.

3.2.6 Paving Materials

Paving materials for roadways will meet minimum road and street standards for emergency vehicle access while highlighting the rural scenery and may include chip seal, decomposed granite overlay, or gravel. Depending on the architectural theme there could be stamped asphalt, concrete design treatment, or natural stone, which will be provided as part of the road development plan.

3.3 Pathways & Trailways

Pathways and trailways shall be designed to blend with the existing natural topography and vegetation. Materials and designs shall be subtle and complement the surrounding landscape and architecture. The site-wide network shall be divided between primary paths and secondary trails.

An existing and extensive system of ranch roads and horse trails shall be reutilized, to the extent feasible, as part of the existing secondary trail network. These existing roads and trails will offer well-defined travel routes to reach some of the most scenic areas and recreational opportunities throughout the Resort site. Existing trails shall be improved if necessary to align with the quality and maintenance standards of the secondary trail network.

New primary paths shall provide convenient pedestrian and bicycling routes to access Resort amenities. These pathways shall be typically situated near the primary roadway network in order to separate vehicular and non-vehicular users on more heavily-travelled routes. These paths shall mostly be four to six feet in width and with a slope range of zero to eight percent.

New secondary trails shall expand upon the existing ranch road and horse trail network to offer more recreational walking, running, hiking, biking, and horseback riding opportunities. These paths shall mostly be five to 15 feet in width and with a slope range of zero to 15 percent. These paths shall primarily be surfaced with dirt and gravel.

3.4 Site Features

3.4.1 Walls, Fences, & Gates

A complementary design approach to walls, fences, and gates will reinforce the quality, continuity, and character of the development. These features will create a consistent aesthetic experience throughout each residential and commercial site, complementing its design by the use of each site's characteristic materials.

3.4.2 Retaining Walls

Wherever feasible, graded cut slopes conforming to existing conditions shall be implemented rather than retaining wall structures.

Retaining walls may be used in order to reduce grading impacts, preserve trees, create visual interest, terrace outdoor living areas, provide site access, and better achieve the intention of

these Design Guidelines. Retaining walls should generally be dark in color or match surrounds to visually recede in the landscape.

Retaining walls shall follow the existing contours of the land and be built to closely resemble the existing topography or otherwise reflect the geometries of nearby architecture. Stepped-back or terraced wall structures, which should include ample areas for planting, are encouraged where grade changes requires retaining walls to exceed four feet in height.

Retaining wall materials shall be well-suited for its purposes, surrounding site conditions, and the material selections of nearby infrastructure, architecture, and site features. Examples of appropriate materials include board formed concrete, rammed earth, soldier pile, segmental block, dry-stacked stone and gabion wall design.

3.4.3 Fencing

Fencing shall be minimized along roadway and pathway corridors as well as within rural landscapes and the designated open space. The careful use of fencing will help to retain the sense of a continuous rural landscape. When fencing is used for the purposes of creating safety and security, protecting cultural or biological resources, or contributing to the site's agrarian character, siting and placement shall be carefully designed in relation to vineyard perimeters, pasture perimeters, or along grazing corridors (see section 2.3.1 for a description of grazing and vineyard fencing types). Fence lines which cross roadways may require cattle guards to limit livestock and destructive wildlife passage.

Generally, fencing materials shall be well-suited for its purposes, surrounding site conditions, and the material selections of nearby infrastructure, architecture, and site features. Examples of appropriate materials include various farm fencing systems, including wooden post & rail fencing and wooden or metal post & wire fencing.

3.4.4 Gates

Vehicular and pedestrian gates shall primarily be used to control access points, manage livestock movements, and protect agricultural operations.

Gates shall utilize a similar complementary materials of materials and design vernacular and be well-suited for its purposes, surrounding site conditions, and the material selections of nearby infrastructure, architecture, and site features. Gates constructed off public or primary site access roads shall be set back from the road to allow emergency vehicle turn around.

Vehicular gates shall be used to control traffic for the purposes of safety and security. These gates shall be no less than the width of the roadway plus a one foot shoulder on each side. They may include signage markers, automatic opening and closing systems, voice intercoms, a lock box or other emergency release devices approved by the County Fire Chief, and associated outdoor lighting.

Pathway or trailway gates will occasionally be necessary for safety or security; in these circumstances, pedestrian gates shall be a minimum of three feet wide and, if possible,

constructed in the same style and materials as the adjoining fence or nearby vehicular gates. Pedestrian gates will be self-closing and lockable with ADA compliant hardware.

Agricultural gates, including cattle guards, shall be used to control herd movements and identify access locations for vineyards, orchards, and gardens.

3.4.5 Signage

Resort signage shall create a consistent and intuitive wayfinding experience inspired by the Resort's land, culture, community, and architecture. All signs, sizes, locations, and quantities shall be carefully selected to minimize visual impact and avoid clutter while also maintaining functionality. Signage shall be aesthetically pleasing in design and form. Signage shall align with the best practices for wayfinding design, graphic design, and architectural sign fabrication industries.

Various types of signs shall be allowed throughout the Resort site. All signage types shall be designed using typical viewing heights and font sizes for vehicular and pedestrian navigation and be based on common signage standards and the viewing requirements for specific signage locations. This includes the following types of signage:

- ***Site Access Signage:*** Entryway signage shall be located at the Resort's primary, secondary, and winery entrances. These signs are intended to identify the Resort site and guide vehicular traffic from the public right of way onto the site.
- ***Street Name Signage:*** Street signage shall identify named roads within the Resort. The street signs shall be posted at intersections and are usually in perpendicularly oriented pairs identifying each of the crossing streets.
- ***Vehicular Wayfinding Signage:*** These free-standing signs shall be located prior to key navigation decision-making points in the vehicular travel path. They shall be strategically located for vehicular visibility with time to view and respond to directional information. They may include identification information and directional arrows.
- ***Pedestrian Wayfinding Signage:*** These signs shall be located at key pedestrian decision-making points and higher traffic areas. They shall guide pedestrians to project amenities, locations, and landmarks. This includes trail signage that marks starting points, routes, and distance markers.
- ***Building & Amenity Identification Signage:*** These signs shall identify entrances or arrival areas at building or amenity destinations for both drivers and pedestrians. These signs may include building, area name, and/or address information and may also be used for fire safety location identification.
- ***Code & Life Safety Signage:*** These signs shall be in the color, size, shape, and placement to provide for their respective function and conform to applicable codes.

Signage design shall be subtle with clean, modern touches and natural muted color palette. The material palette shall be compatible with nearby architectural styles and the Resort's general rural

setting. This shall be accomplished by utilizing high-quality materials with elegantly incorporated details. Signs shall be of a high-quality and durable construction. Potential materials include steel, wood, concrete, stone, or painted metal or wood surfaces.

Signs shall be carefully and selectively illuminated to offer nighttime information. Illumination could be internal, external, or ambient depending on the location and site conditions. All signage lighting fixtures and sources shall emit a color-balanced, consistent, and uniform light with no browning, flickering, haloing, or other uneven effect. The use of high quality signage lighting shall follow key criteria:

Where signs are internally illuminated, light-transmitting surfaces shall be non-gloss, matte materials.

Only letters and logos shall transmit light. Illuminated backgrounds or boxes shall be avoided.

Lighting signage shall be controlled by a time clock or photocell.

All signs shall be fabricated and installed with UL approved components in compliance with all applicable building and electrical codes.

Signs shall be designed using typical viewing heights and font sizes for vehicular navigation, based on common ADA standards and the viewing requirements for specific signage locations.

Sign locations shall be carefully chosen to optimize functionality, visibility, and legibility. Although specific placement will vary based on site conditions, the following are general guidelines for sign placement:

- *Site Preparation:* Sign placement shall primarily be in locations selected for optimal functionality. It may be necessary to relocate any obstructions or otherwise clear rocks, shrubs, or bushes.
- *Straight Ahead:* Signs shall be placed in locations straight ahead of an approaching driver or pedestrian's immediate cone-of-vision. In particular, drivers cannot be expected to turn their heads to read a sign.
- *Perpendicular:* Signs shall be perpendicular to the approaching viewer. Signs shall never be placed parallel to passing traffic.
- *Right Side:* Signs shall be placed on the right side of the roadway or pedestrian path wherever possible. Drivers are not conditioned to look to the left side of the road for driving information. An exception to this rule is the use of a double-face sign mounted perpendicular to a roadway or walkway. In this situation, the sign shall be clearly legible from both directions.
- *Advance Warning:* Roadway signs which communicate critical information shall be placed in advance of intersections to afford a safe distance for reaction to and execution of the maneuver.

Signs spacing shall prioritize creating an organized experience throughout the Resort. Signage sites shall be carefully selected so that groups of signs do not create cluttered appearance and

communicate priorities. Drivers shall be provided time to read and react to one sign before another is presented.

3.4.6 Lighting

Site-wide lighting design shall promote Dark Sky Guidelines through the mindful selection of lighting fixtures and controls to ensure sensible and appropriate light. Lighting shall be selectively used to illuminate and differentiate outdoor areas; guide nighttime navigation along roadway and pathway corridors; direct access to commercial, residential, and building entries; highlight signage and address markers; and improve safety and security. Emphasis will be placed on the implementation of the energy efficient outdoor lighting technologies, that will enhance safety and security, support surrounding ecosystems, and follow dark sky preservation guidelines.

Lighting along roadways and pathways and within parking areas shall only be used to the extent necessary to guide nighttime navigation and ensure safety and security. In general, lighting shall be more prominent at intersections and commercial or residential access points to enhance safety. Lighting fixtures and patterns along roadways and pathways shall complement nearby architectural styles while also creating a thematic site-wide experience for visitors and residents. Lighting shall be no higher than necessary to provide efficient lighting for its intended purpose.

Accent lighting may be used in limited circumstances to emphasize prominent site features, such as boulders, artwork, or plantings. Accent lighting—including up lighting—of landscape plantings will be allowed. This type of lighting shall generally avoid directly illuminating buildings, except for facade features, and favor the use of hidden light sources, including fixtures that are recessed into the ground or fixtures hidden by plant materials.

Site-wide lighting shall avoid lighting or glare which is directed onto nearby residences, commercial buildings, or amenities. Lighting design shall also be carefully designed to avoid unnecessary illumination of natural habitats. The use of intense, bright, blinking, or flashing lights shall be avoided.

Wherever possible, landscape lighting fixtures shall be equipped with cut-off shields to minimize visibility from adjacent areas. Lighting fixtures shall be durable and easily maintained. As much as possible, lighting fixtures shall utilize low-intensity and energy-efficient lamps that provide light color temperatures that promote the health of humans and wildlife. On-demand photocell, motion-sensing, and timed lighting systems shall also be prioritized to minimize unnecessary nighttime lighting. Lights used during the designated nighttime hours shall be dimmed to reduce the intensity of any light projected by the project.

3.4.7 Recreational Areas, Structures, & Furnishings

In order to provide additional amenities and resort opportunities throughout the site, recreational areas will be allowed throughout the Resort, particularly along roadway and pathway corridors and in the nearby vicinity. This includes spaces such as hiking stations, picnicking areas, and scenic overlooks.

Within these areas, small structures such as trellises, gazebos, pergolas, and pavilions may be

constructed. These areas may also accommodate various types of outdoor site furnishings, including benches, picnic areas, trash urns, bicycle racks, shade canopies, or other common elements serving Resort visitors. These areas shall be designed to be clearly visible and accessible, but not disruptive to the overall resort experience. These areas shall be designed to be reflective of nearby architecture, but also compliment into the overall resort experience.

Site furnishings shall be of high quality and durable construction. All trash and recycling bins and enclosures should be covered, unobtrusive, and located in areas that minimize visual impacts.

3.4.8 Outdoor Artwork, Monuments, & Landmarks

Outdoor artwork, monuments, landmarks, and other types of free-standing objects will be allowed throughout the Resort. These will be particularly encouraged at focal points such as roadway and pathway intersections, scenic overlooks, and arrival areas.

3.4.9 Accessory & Utility Structures

Accessory and utility structures shall be located throughout the Resort site. These may include wastewater treatment facilities, solar fields, energy substations, cisterns, wells, and propane tanks. Wherever feasible, utility facilities and structures shall be placed in locations that are not visible from the public viewshed. If required to be located in a site visible from the public viewshed, utilities facilities and structures shall be enclosed by thoughtfully detailed shielding and fencing devices, which may include quality materials and landscape elements. Wherever possible, these utilities and structures shall be landscape screened.

SECTION 4 RESIDENTIAL ARCHITECTURAL DESIGN GUIDELINES

This section applies to future residential architecture within residential estate and Resort Residential Parcels dictated by the Tentative Maps; commercial architecture and land uses are mostly dictated by the SPOD.

The Resort shall be characterized by high quality architecture designed in response to the natural beauty and diversity of the landscape. High quality design characterizes the intent of the Resort to prioritize quality materials and attention to detail that establish the Resort as a world-renowned destination. The design of the Resort should lend itself to the creation of independent clusters that become diverse communities under the same concepts of ultra-luxury elements. Designers are tasked with the opportunity to respond to the existing landscape creating unique senses of place in conjunction with the elegance and refined taste of the Maha brand.

A collection of building and community concepts have been developed and presented in the SPOD submittal for the first phase of the Resort. The proposed design elements, elevations, and architectural typologies are representative in their design and detail. Site planning, streetscapes, community clusters, and recreational uses have been integrated into the master planning of the site and overall design to foster a quality community and experience. The Resort typologies are based on the mixed-use design intentions critical to the character of the Resort.

These guidelines should be utilized to assist in the preservation and assurance of high quality architectural and landscape design and are not intended to limit or contradict the vision of diversity in design, space, and architecture. Instead these guidelines invite creative design interpretations and encourages unique structures within the GVD.

4.1 Residential Typologies

The design for the residential buildings at the Resort envisions building typologies that have been developed in order to activate the highest potential of the landscape and respect for the site. Designed in harmony with the slope, vistas, and surrounding landscape the site planning, streetscapes, community clusters have been refined to foster a unique and awe-inspiring experience for guests and residences.

4.2 Height

Building height should be measured from the vertical distance from the average level of the highest and lowest point of the portion of the lot covered by the enclosed building footprint to the average point of the roof. Residential structures shall have a maximum height no greater than 40 feet. Dormers, chimneys, maintenance features, or alternative energy production materials are exempt from height calculations.

4.3 Lot Coverage & Density

The master development plan is centered around the concept of a light touch on the land. This design principle shall extend into planning of individual residential villa estate parcels.

Residential villa estate parcels must adhere to the Guenoc Valley District guiding documents that outline site and development restrictions. As stated within these documents, each residential villa estate parcel is restricted to a maximum 1.5 acre development area, regardless of parcel size. In addition, regardless of parcel size or oak woodland coverage, no more than 1 acre of oak woodlands can be removed within maximum 1.5 acre development area. It is expected that, in most cases, the development area will be less than 1.5 acres and the removal of oak woodlands within will be less than 1 acre.

The development area shall be determined by aggregating the coverage of primary and accessory structures, such as garages, barns, sheds, and guest houses; swimming pools, hot tubs, and other outdoor water features; private water storage tanks or cisterns; overhead protected coverings, such as trellises; decks; and hardscapes, such as patios, walkways, or driveways (not including the road in which it serves). The parcel coverage shall not include underground accessory structures, such as septic, gas, electrical or water lines; landscaping; agriculture, such as vineyards or orchards; or Resort-wide functions, such as community water tanks or alternative energy production areas.

Prior to construction, additional pre-construction biological surveys will be conducted to provide a map of the environmental constraints to the new landowner. If the development area impacts sensitive species, a clear description of the impacts will be disclosed and proof of mitigation will need to be provided prior to the release of a building or grading permit.

If the above restrictions are followed, no additional review and mitigation is required. However, if greater than a 1.5 acre development area—or greater than a 1 acre impact to oak woodlands within—is requested, additional environmental review pursuant to the California Environmental Quality Act (CEQA) shall be required.

4.4 Massing & Scale

The existing topography should inspire the architectural design. Buildings are to be sited to conscientiously acknowledge existing contours. Residential structures shall differ in their massing and scale in response to programming and site context through the Resort based on the cluster area they belong to. Residences within the same cluster shall have a similar and recognizable style to associate them with that specific commercial cluster.

4.5 Setbacks

The Project shall maintain a 50 foot setback from the Napa County line as directed by the SPOD and the Tentative Maps. Setbacks from individual property lines will be dictated by the planned development zoning of this area and shall follow the minimum fire code clearance from structures.

Residential structures shall be designed to avoid permanent impacts to riparian areas to the

greatest extent possible. Work within riparian setbacks shall be limited and will adhere to all jurisdictional requirements. This includes the following minimum setbacks:

- Ephemeral Streams/20' Setback from the ordinary high water mark (OHWM)
- Intermittent Streams/20' Setback from top of bank (TOB)
- Perennial Streams/30' Setback from TOB
- Open Water/20' Setback from OHWM
- Wetlands/20' Setback from OHWM

In cases where riparian areas could be potentially impacted, usually by roads or driveways, these impacts shall be minimized through various measures such as designing bridges to free span streams to the greatest extent feasible in order to minimize aquatic barriers. In addition, permitting through the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Wildlife will result in measures that minimize riparian habitat impact and the wildlife that depends on it throughout the project.

4.6 Building Materials & Criteria

Materials should be high quality, low-luster and enhance the vision of The Resort and Resort architecture. All building materials will abide by relevant California Building Codes "CBC" and Wildland Urban Interface "WUI" Standards. Emphasis will be placed in actively preventing the spread of fire, ember, or ashes between structures and maintaining the preservation of the principal structure. Where a connection point exists, it should be made with a fire resistive or noncombustible connector so that there is no conduit between homes and landscape structures such as fences, trellises, gazebos or porches.

4.7 Porches & Decks

Architectural projections and recesses can provide a variety of depths and features to residential homes. Porches and decks are encouraged and increase the massing of the structure. Architectural projections off the principal structure shall also abide by CBC standards. For instance, when decks are utilized measures shall be implemented to consider fire protection and prevention measures. Evidence of non-combustible, fire resistive materials, or materials with the same overall practical effect shall be provided as part of the building permit process.

4.8 Roofs & Rooflines

A variety of roof materials and styles are allowed if they are congruent with the architectural cluster in which they are being utilized. Flat or sloped roofs as well as green roofs covered with plant materials and adequate soil or growth medium are encouraged through the Site. The use

of synthetic turf for roofs is prohibited. Rooftop solar panels are encouraged but shall be mindfully integrated with the roof design. Similarly, roof penetrations of primary structures (vents, chimneys, turbines, flues, sprinklers, etc.) shall be considered in the design and large rooftop mechanical equipment shall be masked as much as possible.

4.9 Exterior Fire Suppression Systems

Exterior fire suppression systems will be encouraged for all primary residential structures; these systems will be required for primary residential structures on residential access roads that exceed ¼ mile in length. Fire suppression systems are remote or heat activated. During a fire, they prevent substantial damage to the primary building as well as nearby outdoor features. Screening of equipment roof projections shall occur as much as necessary from all properties within the GVD including residential, commercial, or right of ways. In the event that any exterior fire suppression system does not blend into the architectural aesthetic and cannot be masked, an alternative may be requested as long as it is found to meet the same overall and practical effect.

Exterior Wildfire Defense Systems will be encouraged for all primary residential structures; these systems will be required for primary residential structures on residential access roads that excee d ¼ mile in length. Exterior Wildfire Defense Systems are activated by a multi spectrum infra-red detector. During a fire, they prevent substantial damage to the primary building as well as nearby outdoor features. Screening of equipment roof projections shall occur as much as necessary from all properties within the GVD including residential, commercial, or right of ways.

The Exterior Wildfire Defense System is designed to blend in with the current architecture aesthetics of the home designs for GVD. All Exterior Wildfire Defense Systems will be monitored, 24/7 365, with on location assistance and regularly scheduled maintenance. When selecting the Exterior Wildfire Defense System during the building process, the system will mirror all systems installed on all commercial buildings, including clubs, and perimeter protection, for GVD. These systems are installed internally during the building process to ensure transparence of the system with the architecture.

4.10 Photovoltaic Panels

Solar panels are encouraged and shall be integrated with the site design when installed within the GVD. Solar panels may be located on the building roofs or set on frames in the landscape. Solar panels may not be used where they would produce a direct glare or redirect sunlight into adjacent or nearby residential or commercial properties. The incorporation of sustainable design elements such as solar will be influenced by technology and the market of innovative solar technology. All electrical conduit from solar frames to the primary structure shall be underground, where feasible.

4.11 Exterior Building Lighting

The exterior building lighting approach shall implement the strategies of the Dark Sky Association guidelines. By controlling exterior building lighting levels and operation, the lighting design will take careful consideration of energy efficient outdoor lighting technologies to achieve community safety, security, and acknowledge surrounding ecosystems. Adaptive lighting controls shall be provided, in combination with lighting fixtures designed to reduce glare and attenuate harsh lighting that may create shadows. All interior and exterior light sources shall be designed so that no direct beam illumination leaves the residential property line. Exterior building lighting includes fixtures on the exterior of buildings.

For guidance on residential landscape lighting, see section 5.14.

4.12 Accessory to Residential

Accessory Use structures shall be designed in context with the surrounding architecture and primary structure. Accessory Uses may include but are not limited to the following: garage, pool houses, accessory dwelling units, storage facilities, art studios, yoga studios, etc. The Accessory Use structure may be designed appropriately to provide visual interest and cohesion with the surrounding landscape. Measures should be taken to mask and contain Accessory Use structures that serve to function as service areas, such as housekeeping cottages. Accessory Use structures are included in lot coverage, see above for limitations on lot coverage.

SECTION 5 RESIDENTIAL LANDSCAPE DESIGN GUIDELINES

5.1 Residential Landscape Design Objectives

Residential landscape design shall be closely integrated with the existing landscape character using a 'light-touch' approach that complements and elevates the site's inherent qualities. Wherever possible, existing native and agricultural landscape patterns and landforms shall be preserved and maintained and unnecessary site disturbance shall be minimized. Wherever necessary, residential landscapes shall be restored to enhance both ecological functioning and viewsheds. Where unique species or plant associations such as purple needlegrass, leather oak chaparral or other native grasslands occur within the parcel, efforts shall be taken to identify, preserve and enhance these plant communities.

5.2 Vehicular Access & Parking

See section 3.2 for guidance on residential vehicular access and parking.

5.3 Pools & Water Features

Pools and water features—including swimming pools, infinity pools, lap pools, reflecting pools, hot tubs, and fountains as well as their required equipment—will be allowed within residential parcels and subject to local building ordinances.

Pools and water features shall be designed to visually compliment surrounding residential landscape and architectural design. Exposed walls and edges that are visible from off-site shall use a material palette that is well incorporated into the larger landscape and is compatible with building design and materials. They shall be sited to minimize grading and significant disruption to the natural landscape.

Pools and water features shall be designed and maintained to utilize water efficiently and minimize evaporation loss. Wherever possible, water features will reply upon non-potable water sources.

Pool equipment shall be located behind walls or in underground vaults so as to reduce equipment noise. Noise-absorbing covers may also be required if it the equipment is audible from adjacent properties after installation.

5.4 Pool Decks, Courtyards & Terraces

Patios, courtyards, terraces, and other similar types of outdoor areas are encouraged to accommodate a wide range of activities; these outdoor "rooms" can provide for seating and eating areas, cabanas, fire pits, foundations, pool lounging and diving areas, and other similar uses. These areas shall be designed to complement the site's natural topography, vegetation, and water conditions.

5.5 Walls, Fences & Gates

See 3.4.1 for guidance which also applies to residential walls and gates. See below for design guidelines for residential fences.

5.6 Residential Fences

Fencing materials shall be well-suited for its purposes, surrounding site conditions, and the material selections of nearby infrastructure, architecture, and site features. Fencing used for the purposes of creating safety and security and contributing to the site's agrarian character will help to both retain the sense of a continuous rural landscape as well as mindfully preserve wildlife corridors as to not restrict special specie wildlife movement. Residential fencing locations shall also be coordinated with common area fencing throughout the Project.

Fencing design and materials shall generally be visually permeable and preserve views from roadways, pathways, commercial buildings, and nearby residential parcels. Examples of appropriate materials include various farm and wildlife friendly fencing systems, including wooden post & rail fencing and wooden or metal post & appropriately spaced wire fencing to facilitate safe wildlife passage. Residential fencing shall follow wildlife friendly fencing guidelines to increase site permeability and reduce resistance for wildlife movement and minimize features that are dangerous to animals. Examples are excessive height, lower rails or wire that is too low or to closely spaced, poorly maintained fences with loose wires, or designs that are difficult for animals to see or that create a complete barrier.

To increase and maintain the permeability of wildlife movement throughout the Project, the Project design establishes low density residential footprints, large designated open space areas, riparian and stream setbacks, and oak woodland preservation. When wildlife movement pathways may meet a constraint such as fencing or buildings, the Project has identified alternative corridors and provided accommodations that have been identified within the habitat connectivity analysis to facilitate wildlife movement.

Residential villa estate property owners with a Habitat Connectivity Easement Area will have two options. First, if they would like to install fencing along the perimeter or anywhere within the Easement Area, then only fencing which allows for wildlife movement is allowed. Second, if fencing which does not allow for wildlife movement is desired, then this fencing cannot be located anywhere within the Easement Area.

5.7 Recreational Amenities

Residential parcels are allowed to include various types of outdoor recreational areas, such as tennis courts, croquet courts, bocce ball courts, lawn bowling, or polo fields. These types of recreational amenities shall not create a noise or visual nuisance for property owners outside of the Project Site. Where necessary, recreational amenities within residential parcels, shall be landscape screened.

5.8 Planting Selection & Design

As much as possible, existing landscape patterns shall be preserved and enhanced within the residential parcel. This strategy aligns with the overall Resort objective of creating a 'light-touch' approach to integrating development into the area's existing woodland, grassland, and agricultural character. To the extent feasible, the removal of mature and healthy vegetation shall be limited and disturbed areas restored to healthy and pre-development, natural conditions, particularly areas damaged by fire. A landscape plan shall be prepared for each parcel or groups of parcels to specifically address protection and enhancement of special status plants, native grasslands and chaparral communities.

New planting designs shall be arranged in a way which improved upon the existing site condition, including shading exposed areas during the summer and providing solar access to key locations during the winter months.

The landscape design should prioritize the use of plants which are native or well-adapted to the local northern California climate and setting. To the extent feasible native species which may be rare or endangered elsewhere shall be used for new landscaping, particularly endemic species cultivated at the Guenoc Valley nursery including a variety wildflowers, grasses, shrubs and trees. Native species will expand and enhance the existing landscape and become important food sources and habitat for native birds, butterflies and wildlife. As much as possible, selected plantings shall be drought-tolerant and require limited irrigation, fertilization, and maintenance. Appendix A provides a recommended residential planting palette list. Non-native invasive species shall be avoided; in addition, planting designs shall avoid using tree species with invasive root systems near utility lines and paving.

The use of ornamental planting shall be selectively used to provide contrast and interest within the planting design, generally in close proximity to structures. Trees and shrubs shall occasionally be used to screen certain features within the site (i.e. utility structures, parking areas, sport courts, etc.).

Any new planting design and selected species shall follow landscape wildfire prevention objectives (see 5.10), especially in terms of recommendations for plant selection, clearance, and spacing. To the extent feasible, planting design and selection shall avoid fire-prone plantings (See Appendix B).

5.9 Residential Vineyards

See 2.3.2; the guidance provided within this section will also apply to private, residential vineyards.

5.10 Irrigation & Water Conservation

Water is a valuable resource within the Guenoc Valley District. Residential landscape design shall minimize water use and irrigation requirements. In order to create a water efficient landscape, irrigation design for residential parcels shall conform to the Water Efficient Landscape Ordinance (WELO).

Landscape design shall prioritize the use of drought-tolerant, climate-appropriate, native, and adaptive plants with low water use requirements. Designs shall emphasize grouping plantings according to water consumption needs and site microclimates. Planting areas shall be mulched with locally sourced bark or gravel mulch to retain soil moisture and provide weed control. Until planting areas become established, erosion control measures such as jute-netting, straw wattles, hydroseed mixes, and erosion control groundcovers may be used.

Residential landscape design shall minimize the necessity for ongoing irrigation; as much as possible, ongoing irrigation shall be limited to plant establishment periods and be terminated thereafter. However, irrigation systems installed primarily for planting establishment could be maintained and re-activated during wildfire seasons or during wildfires for additional site and structure protection.

Irrigation distribution systems may be undergrounded and other sub-surface irrigation techniques—such as capillary systems—should be used where appropriate to limit water evaporation and run-off. Irrigation systems shall use a central, computerized controller to maximize efficiency; computerized systems with rain and soil moisture sensors and connections to evapotranspiration weather stations will facilitate efficient water use.

Wherever feasible, residential landscape design shall utilize cisterns and other applications to harvest and store stormwater for irrigation needs.

5.11 Wildfire Prevention

Wildfire is a continuous risk throughout the Resort. The following steps shall be taken in order to reduce wildfire risk on each individual residential parcel. Please refer to the *Wildfire Prevention Plan* for additional information on residential wildfire prevention strategies.

5.11.1 Determine Total Defensible Space and Defensible Zones

Defensible space and zones shall be established and maintained for the purposes of reducing fire risk in the immediate vicinity of the residential structure. As detailed below, the recommended approach for determining total defensible space and zones will depend on the conditions and configurations of each residential parcel.

Determining Total Defensible Space

The total defensible space will depend on the unique topographic and vegetated conditions of each parcel. The guideline below provides information on determining total defensible space:

		General Parcel Slope		
		0 - 20% *Flat to Gently Sloping*	21 - 40% *Moderately Steep*	40% + *Very Steep*
General Parcel Vegetation Coverage	Grass-Dominated	50 feet	100 feet	100+ feet
	Shrub-Dominated	100 feet	150 feet	150+ feet
	Tree-Dominated	50 feet	100 feet	150+ feet

- Grass-Dominated Coverage: Landscapes dominated by grasses, weeds, and widely scattered shrubs
- Shrub-Dominated Coverage: Landscapes dominated by shrubs, scrub, or chaparral
- Tree-Dominated Coverage: Landscapes dominated by trees; if understory is substantially shrubs, follow "shrub-dominated coverage" category

Determining Defensible Zones

Two defensible zones shall be established and maintained within the total defensible space:

- Zone 1: Regardless of the total defensible space, the first defense zone will be maintained zero to 30 feet from the edge of the residential structure.
- Zone 2: The second defense zone will be maintained from 30 feet from the edge of the building to the edge of the total defensible space (e.g. 50 feet, 100 feet, 150 feet); this includes a defensible space of zero to 15 feet from the driveway edge.

Wherever necessary or possible, adjacent residential parcel owners and the Resort ownership will cooperatively address defensible space concerns which cannot be fully established or maintained within the residential parcel line.

5.11.2 Prepare Site by Removing & Reducing Flammable Vegetation

Once the total defensible area and zones are established, the following fuel reduction strategies shall be prioritized to prepare the site for residential dwellings:

Zone 1: Remove Flammable Vegetation

Within this zone, highly flammable vegetation shall be removed. This includes removing all standing dead trees and shrubs. All downed dead trees, tree branches, and shrubs shall also be removed if not yet decayed. All dead tree and shrub branches shall be removed. Trees shall generally be pruned up to a height of 10 feet, depending on tree species and understory conditions. Flammable shrub species which are not removed shall be thoroughly pruned.

Zone 2: Reduce Flammable Vegetation

Within this zone, flammable vegetation shall be reduced. Trees and shrubs shall be selectively pruned to reduce flammable parts, such as low-hanging or dead branches. Dead vegetation shall also be selectively removed within this wider zone. To adequately protect the parcel from wildfire risk, selective clearing and thinning of existing vegetation to create well-separated groupings of plantings may be necessary.

5.11.3 Establish New Landscape and Site Design

Various actions shall be prioritized to create a fire safe landscape and site design surrounding the residential structure.

Fire-Resistant Planting Design and Selection

Planting designs shall accommodate adequate planting spacing and clearance strategies in order to reduce the risk of fire spreading horizontally or vertically (see *Wildfire Prevention Plan* for further spacing and clearance recommendations). Planting designs and patterns shall anticipate the mature size of new trees and shrubs. Simple, low-volume, and well-separated planting arrangements will generally achieve these spacing and clearance objectives. All efforts shall be made to avoid tree limbs touching the residential structure or powerlines; tree limbs shall also not be within 10 feet of the chimney.

Planting selection shall avoid fire-prone species and instead prioritize fire-resistant species (see Appendix B). In general, fire-resistant species are low-growing with a high moisture content and have stems or leaves that are not resinous, oily, or waxy.

Small-Scale Fire Breaks: Hardscapes and Irrigation

Wherever possible, the landscape design shall be configured in a way to create a series of smaller-scale fire breaks in the immediate vicinity of the residential structure. This includes selectively using a pattern of non-combustible materials (such as gravel mulch, boulders, and rocks) as well as driveways, walkways, patios, and parking areas to reduce fire risk. Pools, water features, ponds, or streams shall also be creatively used for this purpose.

5.11.4 Implement Additional Strategies

Additional landscape design strategies shall also be prioritized to reduce fire risk within the residential parcel and improve emergency response. This includes the following:

- Constructing fencing with non-combustible materials, such as stone or metal, rather than wood;
- Enclosing areas below decks to reduce the risk of debris ignition;
- Clearly marking the address number on the house itself and at the driveway entry to aid in identification in the case of a fire emergency; and
- As much as possible, designing residential driveways and bridges to allow for large-scale emergency vehicle access.

5.11.5 Manage Landscape to Reduce Risk

Various landscape management practices shall be prioritized to address wildfire hazards within the residential landscape. This includes the following recommendations for residential property owners:

- Periodically inspect the residential property to maintain defensible space—which includes ongoing removal and reduction of flammable vegetation and reestablishment of vegetation clearance and spacing standards;
- Prune tree limbs which are within 10 feet of buildings or chimneys or are otherwise encroaching on powerlines;
- Within the defensible space, trim tree limbs below 10 feet in height; for smaller trees, prune the lower 1/3 of the branches;
- Routinely mow grasses and wildflowers within the defensible space to a maximum height of 4 inches, particularly during dry seasons;
- Keep vegetation well-irrigated, particularly within the first defense zone;
- Where feasible, irrigation systems used for plant establishment should be maintained for additional wildfire protection;
- Remove vegetation debris that accumulates on the roof or within the rain gutters;
- Place combustible debris (firewood, wood scraps, grass clippings, leaf piles, or garbage cans) and propane tanks outside of the first defense zone; and
- Keep any ignitable outdoor furniture and equipment (i.e. wooden brooms and shovels) 10 feet away from the residential structure or in an enclosure.

Fire prevention landscape maintenance shall be a permanent and ongoing requirement of individual homeowners and will be incorporated into the CC&Rs.

5.12 Exterior Service Areas

Exterior service areas—such as trash and recycling enclosures, work areas, and outdoor storage—contribute to the functionality of residential parcels. These areas shall be located and designed to be discrete and screened from the public viewshed. Wherever feasible, these areas shall be integrated into the residential building design. Trash and recycling storage areas shall be easily accessible to service personnel, contain odor, and be secured from wildlife.

5.13 Landscape Structures & Furnishings

Residential landscapes may include outdoor structures such as trellises, gazebos, pergolas, pavilions, and play equipment. The landscape may also include outdoor site furnishings, including benches, picnic tables, trash urns, bicycle racks, shade canopies, or other common elements. Where feasible and aligned with the site design, these structures and furnishings should be designed to appear as extensions of buildings or building components. To the greatest extent possible, freestanding elements should be sited so as to not be visible from adjacent residences or the public right of ways. Furnishings shall be of high-quality and durable.

5.14 Landscape Lighting

Residential lighting design shall prioritize the Dark Sky Association guidelines by minimizing exterior lighting. Lighting shall be selectively used to illuminate and differentiate outdoor areas, guide nighttime navigation, direct access to building entries, highlight signage and address markers, and improve safety and security.

Accent lighting may be used in limited circumstances to emphasize prominent site features, such as boulders, artwork, or plantings. Accent lighting—including up lighting—of landscape plantings will be allowed.

Wherever possible, light fixtures and sources shall be hidden from direct daytime or nighttime view by being recessed into the ground or hidden by plant materials. Lighting levels shall be no higher than necessary to provide efficient lighting of various landscape areas. Low-level, pedestrian-scale lighting shall be used to the greatest extent possible.

Landscape lighting fixtures should be equipped with cut-off shields to limit visibility from adjacent areas. Lighting fixtures shall be durable and easily maintained. As much as possible, outdoor lighting shall utilize low-intensity and energy-efficient light sources that provide appropriate light color temperatures. On-demand, photocell, motion-sensing , and timed lighting systems shall also be prioritized to minimize unnecessary nighttime lighting.

Residential landscape lighting shall avoid lighting or glare which is directed onto the roadway or

nearby residences, commercial buildings, or amenities. Lighting design shall also be carefully designed to avoid unnecessary illumination of natural habitats. The use of intense, bright, blinking, or flashing lights shall be avoided.

5.15 Outdoor Artwork & Monuments

Outdoor artwork, monuments, and other types of free-standing objects may be allowed on residential parcels. These will be allowed to provide visual interest and opportunities for personal expression by homeowners. These types of objects shall be placed in locations which limit visibility from the public right of way.

5.16 Address Markers

Residential parcels shall have an address marker or monument at driveway entrances. In the case of shared or closely aligned driveways, a single address marker may serve multiple residential parcels. An address marker may also be placed on the residential structure.

Address markers shall be designed to compatible with nearby architecture. Markers shall minimize visual impact and only be used where necessary.

They shall be constructed of high-quality materials. Text and number size shall be visible and legible, particularly at the eye-level for vehicles travelling in both directions; text and number colors shall contrast with their background for optimal viewing from a variety of distances. In order to aid nighttime navigation and safety, address markers shall include either a backlight or downlight lighting treatment; text shall also be reflective for emergency purposes.

SECTION 6 IMPLEMENTATION PLAN

6.1 Applicability & Use

The basic land use standards for the Resort site are established under several documents that have been approved by the County of Lake Board of Supervisors. These include: 1) Lake County General Plan General Plan designation Resort Commercial, 2) The proposed Guenoc Valley District Zoning Ordinance, 3) the Specific Plan of Development ("SPOD"), 4) the Maha Wildfire Prevention Plan, 5) the Tentative Subdivision Maps, and 6) the Maha Resort Guenoc Valley Development Agreement (collectively, the "Governing Documents").

These Design Guidelines constitute a companion document intended to supplement the GVD, as it applies to future development within the Resort site. In the event of a conflict between these Design Guidelines and the Governing Documents, the provisions of the Governing Documents shall control. All uses, construction and improvements permitted under these Design Guidelines are subject to review and approval of the architectural committee established under the CC&Rs and if there is no such committee established, then by the board of directors of the Master Association.

6.2 Conformance with Design Guidelines

Each future building permit submittal shall be reviewed for conformance with these Design Guidelines at time of submittal with the County of Lake. Conformance and completeness shall be assessed and verified by the development team or managing party of the Resort. Conformance to standards established for the Resort are subject to the qualifications set forth in the Development Agreement.

A determination of such conformance is not intended to be deemed an approval as to the compliance of design or construction plans or documents with any applicable building codes and standards, including engineering, building codes, or any applicable state or federal law or regulation.

6.3 Maintenance & Enforcement

The provisions of these Design Guidelines, in conjunction with the Governing Documents, shall apply to future development within the Guenoc Valley District. This document provides general design guidelines that property owners/project applicants must use in applications for individual projects within the Guenoc Valley District. Maintenance and enforcement of these guidelines will be detailed by the CC&R's.

APPENDICES

Appendix A: Recommended Plant Palette List

TYPE	SCIENTIFIC NAME	COMMON NAME
TREE	Acer spp.	Maple
TREE	Aesculus californica	Buckeye
TREE	Aesculus indica	Asian Buckeye
TREE	Alnus spp.	Alder
TREE	Arbutus spp.	Strawberry Tree, Cultivars
TREE	Betula pendula	European White Birch
TREE	Calocedrus decurrens	Incense Cedar
TREE	Camellia sinensis	Tea
TREE	Carpinus betulus	European Hornbeam
TREE	Carpinus caroliniana	North American Hornbeam
TREE	Cercidiphyllum japonicum	Katsura
TREE	Cercis canadensis 'Forest Pansy'	Forest Pansy RedBud
TREE	Cercis occidentalis	Red Bud
TREE	Citrus hystrix	Kieffer lime
TREE	Corylus cornuta var. californica	California Hazel
TREE	Fagus sylvatica	European Beech
TREE	Fraxinus spp.	Ash
TREE	Gleditsia spp.	Locust
TREE	Juglans californica	California Walnut Groves
TREE	Koelreuteria paniculata	Golden Rain Tree
TREE	Lagerstroemia spp.	Crape Myrtle, Cultivars
TREE	Laurus nobilis	Sweet Bay
TREE	Magnolia spp.	Magnolia, Cultivars
TREE	Malus spp.	Apple or Crabapple
TREE	Olea europaea	Olive , Cultivars
TREE	Owari Satsuma	Satsuma
TREE	Platanus × acerifolia	London Plane
TREE	Platanus acerifolia 'Columbia'	London Plane Tree
TREE	Platanus racemosa	California Sycamore
TREE	Prunus blireana	Pink Flowering Plum
TREE	Prunus ilicifolia	Hollyleaf Cherry
TREE	Prunus mume	Japanese Flowering Apricot
TREE	Sequoia sempervirens	Coast Redwood
TREE	Sorbus alnifolia	Korean Mountain Ash
TREE	Sorbus alnifolia	Korean Mountain Ash
TREE	Styrax japonicus	Japanese Snowbell

TYPE	SCIENTIFIC NAME	COMMON NAME
SHRUB/VINE	Achillea melefolium	Yarrow
SHRUB/VINE	Adenostoma fasciculatum	Chamise
SHRUB/VINE	Artemisia californica 'Canyon Gray'	Trailing California Sagebrush
SHRUB/VINE	Asclepias spp.	Milkweeds
SHRUB/TREE	Atriplex canescens	Saltbush, fourwing
SHRUB/TREE	Bergenia crassifolia	Winter-Blooming Bergenia
SHRUB/TREE	Brunfelsia pauciflora 'Floribunda'	Yesterday-Today-Tomorrow
SHRUB/GROUNDCOVER	Buddleja davidii	Butterfly Bush
SHRUB/GROUNDCOVER	Buxus spp.	Japanese Boxwood
SHRUB/GROUNDCOVER	Callistemon	Bottlebrush
SHRUB/GROUNDCOVER	Calycanthus occidentalis	Spicebush
SHRUB/GROUNDCOVER	Calycanthus occidentalis	Western Spice Bush
SHRUB/GROUNDCOVER	Caragana arborescens	Siberian Pea-Shrub
SHRUB/GROUNDCOVER	Carpenteria californica	Bush Anemone
SHRUB/GROUNDCOVER	Carpenteria californica	California Bush Anemone
SHRUB/GROUNDCOVER	Ceanothus spp.	Ceanothus, Cultivars
SHRUB/GROUNDCOVER	Cenothus spp.	California Lilac
SHRUB	Cephalanathus occidentalis	Button Willow
SHRUB	Cercis occidentalis	Western Redbud
SHRUB	Chaenomeles japonica	Japanese Flowering Quince
SHRUB	Chamaemelum nobile	Roman Chamomile
SHRUB	Cistus salviifolius	Sage-leaf Rockrose
SHRUB	Cistus spp.	Rockrose 'Victor Reiter'
SHRUB	Clematis ligusticifolia	Pipestem
SHRUB	Convolvulus cneorum	Silverbush
SHRUB	Convolvulus sabatius	Ground Italian Glory
SHRUB	Cornus sericea spp.	Dogwood
SHRUB	Cynara cardunculus	Artichoke
SHRUB	Echeveria x imbricata	Hens and Chicks
SHRUB	Echinacea purpurea	Purple Cone Flower
SHRUB	Eleutherococcus senticosus	Siberian Ginseng
SHRUB	Encelia californica	CA Bush Sunflower
SHRUB	Epilobium californica	California Fuchsia
SHRUB	Epilobium canum	Fuschia
SHRUB	Erigeron glaucus	Seaside Daisy
SHRUB	Erigeron karvinskianus	Santa Barbara Daisy
SHRUB	Eriodictyon californicum	California Yerba Santa Scrub
SHRUB	Eriogonum fasciculatum	California Buckwheat
SHRUB	Eryngos spp.	Sea Holly
SHRUB	Fragaria chiloensis	Wild Strawberry

TYPE	SCIENTIFIC NAME	COMMON NAME
SHRUB	Frageria vesca	strawberry
SHRUB	Frangula californica	California Coffeeberry
SHRUB	Fremontodendron	Flannel Bush
SHRUB	Gaillardia grandiflora	Gaillardia
SHRUB	Galvezia speciosa	Island snapdragon
SHRUB	Garrya elliptica	Coast Silktassel 'James Roof'
SHRUB	Gazania 'Mitsawa Orange'	Orange Trailing Gazania
SHRUB	Grindelia stricta	Gumplant
SHRUB	Hemerocallis hybrid	Daylily
SHRUB	Hemerocallis spp.	Daylily
SHRUB	Heteromeles arbutifolia	California Holly, Toyon
SHRUB	Hoytia macrostachya	Leather Root
SHRUB	Lavandula spp.	Lavender
SHRUB	Liriope spicata 'Silver Dragon'	Lily Turf
SHRUB	Lonicera hispidula	honeysuckle
SHRUB	Lonicera involucrata	Twinberry
SHRUB	Lonicera japonica 'Halliana'	Hall's Japanese Honeysuckle
SHRUB	Mahonia pinnata	California holly grape
SHRUB	Mahonia repens	Creeping Mahonia
SHRUB	Mahonia spp.	Oregon Grape
SHRUB	Malacothamus fremontii	Bush Mallow
SHRUB	Marrubium vulgare	Horehound
PERENNIAL/SHRUB	Mentha × piperita	Double Mint
PERENNIAL/SHRUB	Mentha suaveolens	Applemint
GROUNDCOVER	Mimulus aurantiacus	Bush Monkey Flower
GROUNDCOVER	Miscanthus sinensis	Silver Grass
GROUNDCOVER	Monarda fistulosa	Wild Bergamot- Bee balm
GROUNDCOVER	Myrica californica	Pacific Wax Myrtle
GROUNDCOVER	Nassella spp. - Melica spp.	Purple Needle Grass
GROUNDCOVER	Origanum vulgare	Sweet Marjoram
GROUNDCOVER	Pelargonium peltatum	Trailing Geranium
GROUNDCOVER	Penstemon heterophyllus var.	Foothill Penstemon
GROUNDCOVER	Philadelphus ssp	Mock Orange
GROUNDCOVER	Phlomis fruticosa	Jerusalem Sage
GROUNDCOVER	Pholmis lanata	Wooly Jerusalem Sage
GROUNDCOVER	Phormium tenax	New Zealand Flax
PERENNIAL	Plumbago auriculata	Cape Plumbago
PERENNIAL	Prunus laurocerasus 'Zabeliana'	Zabel Laurel
PERENNIAL	Punica spp.	Pomegranate
PERENNIAL	Pycnanthemum	Mountain Mint

TYPE	SCIENTIFIC NAME	COMMON NAME
PERENNIAL	Rhamnus Eve Case	low coffeeberry
PERENNIAL	Rhamnus Mound San Bruno	low coffeeberry
PERENNIAL	Rhamnus purshina	Cascara Buckthorn
PERENNIAL	Rhododendron occidentale	Western Azalea
PERENNIAL	Rhus ovata	Sugar Sumac
PERENNIAL	Ribes aureum	Golden Currant
PERENNIAL	Ribes californicum	Hillside Gooseberry
PERENNIAL	Ribes malvaceum	Chaparral Currant
PERENNIAL	Ribes sanguinium	Red Flowering Currant
PERENNIAL	Ribes ssp.	Gooseberry and Currant
PERENNIAL	Rosa banksiae	Flowering Lady Banks' Rose
PERENNIAL	Rosa x Noatraum	Carpet Rose
PERENNIAL	Rudbeckia hirta	Black-Eyed Susan
PERENNIAL	Rudbeckia spp.	Ox-Eye Daisy
PERENNIAL	Salix breweri	Brewer’s Willow
PERENNIAL	Salvia spp.	Sage
PERENNIAL	Sambucus nigra ssp. caerulea	Blue Elderberry
PERENNIAL	Soleirolia soleirolii	Baby's Tears
PERENNIAL	Stachys byzantina	Lamb's Ear
PERENNIAL	Styrax rediviva	California Snowdrop Bush
PERENNIAL	Symphoricarpos albus var. laevigatus	Snowberry
PERENNIAL	Tagetes lemmonii	Bush Marigold
PERENNIAL	Teucrium cossonii majoricum	Majorcan Germander
PERENNIAL	Teucrium fruticans	Bush Germander
PERENNIAL	Teucrium x lucidrys	Germander
PERENNIAL	Thymus vulgaris	English Thyme
PERENNIAL	Tulbaghia violacea	Society Garlic
PERENNIAL	Vitis californica	California Wild Grape
FRUIT	Actinidia spp.	Kiwi, Cultivars
FRUIT	Amelanchier spp.	Serviceberry
FRUIT	Carya illinoinensis	Pecan Seedling
FRUIT	Castanea spp.	Chestnut, Cultivars
FRUIT	Citrus aurantiifolia 'Thornless'	Mexican Thornless Lime
FRUIT	Citrus limon 'Improved Meyer'	Improved Meyer Lemon
FRUIT	Corylus avellana	Hazel, Cultivars
FRUIT	Crataegeus mexicana	Tejocote
FRUIT	Crataegus azarolus	Azarole
FRUIT	Crataegus monogyna	Hawthorn
FRUIT	Diospyros spp.	Persimmon, Cultivars

TYPE	SCIENTIFIC NAME	COMMON NAME
FRUIT	Elaeagnus ebengii	Silver Berry, Cultivars
FRUIT	Eriobotyra japonica	Loquat
FRUIT	Feijoa spp.	Pineapple Guava
FRUIT	Ficus spp.	Figs, Cultivars
FRUIT	Hippophae rhamnoides	Sea Buckthorne, Cultivars
FRUIT	Ideaobatus spp.	Blackberry, Cultivars
FRUIT	Malus spp.	Apples and Crabapples, Cultivars
FRUIT	Mespilus germanica	Medlar, Cultivars
FRUIT	Morus nigra	Persian Mulberry
FRUIT	Oemleria cerasiformis	Oso Berry
FRUIT	Prunica granatum	Pomegranate, Cultivars
FRUIT	Prunus Varities and Species	Peach, Plum, and other Stonefruit
FRUIT	Pyrus communis spp.	Fruiting Pear Cultivars
FRUIT	Ribes viburniflium	Catalina Currant
FRUIT	Sambucus spp.	Elderberry
FRUIT	Vaccinium spp.	Blueberry
FLOWER	Aster chilensis	Aster
FLOWER	Bidens ferulifolia	Fern-leaved Beggarticks
FLOWER	Borago officinalis	Borage
FLOWER	Caesalpinia	Peacock Flower
FLOWER	Calendula spp.	Calendula flower
FLOWER	Calochortus venustus	Mariposa Lily
FLOWER	Centaurea cyanus	Bachelor Buttons
FLOWER	Cichorium intybus	Chicory
FLOWER	Clarkia concina	Clarkia
FLOWER	Coreopis spp.	Tickseed
FLOWER	Dorychium hirsutism	Canary Clover
FLOWER	EschscholzIa spp.	Poppy
FLOWER	Iris macrosiphon	Bowltube Iris
FLOWER	Lomatium dasycarpum	Desert Parsley
FLOWER	Lupinus sericstus	Cobb Lupine
FLOWER	Lupinus albifrons	Silver Lupine
FLOWER	Penstemon heterophyllus	Penstemon
FLOWER	Phacelia californica	Phacelia
FLOWER	Solidago californica	California Goldenrod
FLOWER	Tropaeolum majus	Nasturtium
FLOWER	Zinnia spp.	Sunflowers
GRASS	Agrostis pallens	Seashore Bent Grass
GRASS	Asclepia erocarpa	Indian Milkweed
GRASS	Bromus carinatus	California Brome

TYPE	SCIENTIFIC NAME	COMMON NAME
GRASS	Calamagrostis nutkaensis	Pacific Reed Grass
GRASS	Carex barbarae	Santa Barbara Sedge
GRASS	Carex spp.	Sedge
GRASS	Dantonia californica	California Oatgrass
GRASS	Deschampsia caepitosa	Tufted Hairgrass
GRASS	Eleocharis macrostachya	Common Spikerush
GRASS	Elymus condensatus	Giant Wildrye
GRASS	Elymus glaucus	Blue Wild Rye
GRASS	Equisetum hyemale ssp.affine	Giant Scouring Rush
GRASS	Festuca glauca	Blue Fescue
GRASS	Festuca glauca	Blue Fescue 'Siskiyou Blue'
GRASS	Festuca californica	California Fescue
GRASS	Festuca iadaohensis	Idaho Fescue
GRASS	Festuca mairei	Atlas Fescue
GRASS	Festuca rubra	Creeping Red Fescue 'Patrick's Point'
GRASS	Helictotrichon sempervirens	Blue Oat Grass
GRASS	Hordeum brachyantherum	Meadow Barley
GRASS	Juncus bufonius	Toad Rush
GRASS	Juncus effusus	Soft Rush
GRASS	Juncus patens	California Gray Rush 'Elk Blue'
GRASS	Koeleria macranta	June Grass
GRASS	Leymus triticoides	Creeping Wild Rye
GRASS	Melica californica	California Onion Grass
GRASS	Muhlenbergia capillaris	Muhly Grass
GRASS	Muhlenbergia rigens	Deer Grass
GRASS	Nassella (Stipa) pulchra	Purple Needle Grass
GRASS	Poa secunda	Pine Bluegrass
GRASS	Schoenoplectus acutus	Hardstem Bulrush
GRASS	Scirpus acutus	Hardstem Bulrush
GRASS	Scirpus californicus	California BuIrush
GRASS	Sporobolus airoides	Alkali Sacaton
GRASS	Stipa cemua	Nodding Needle Grass
GRASS	Stipa pulchra	Purple Needle Grass
FERN	Athyrium filix-femina	Lady Fern
FERN	Polystichum munitum	Western Sword Fern
VINE	Bougainvillea spp.	Paper Flower
VINE	Clematis armandii	Evergreen clematis
VINE	Clytostoma callistegioides	Violet Trumpet Vine
VINE	Distictis buccinatoria	Blood-Red Trumpet Vine
VINE	Gelsemium sempervirens	Carolina Yellow Jessamine

TYPE	SCIENTIFIC NAME	COMMON NAME
VINE	Humilus lupulus	Hops
VINE	Lonicera hildebrandiana	Giant Burmese Honeysuckle
VINE	Lonicera japonica 'Purpurea'	Purple-Leaf Honeysuckle
VINE	Parthenocissus tricuspidata	Boston Ivy
VINE	Rosa banksiae	'Lady Banks' Rose
VINE	Rubus spp.	Bramble Fruits, "Berries"
VINE	Vitis spp.	Grapes, Cultivars
ANNUAL	Antirrhinum majus 'Dwarf Varieties'	Snapdragon
ANNUAL	Begonia semperflorens-cultorum	Wax Begonia
ANNUAL	Brassica oleracea acephala	Flowering Kale
ANNUAL	Celosia cristata 'Dwarf Varieties'	Feather Crested Cockscomb
ANNUAL	Centaurea cineraria	Dusty Miller
ANNUAL	Clarkia unguiculata	Purple Clarkia
ANNUAL	Coleus hybridus	Coleus
ANNUAL	Dianthus spp.	Dianthus Flowers
ANNUAL	Euphorbia pulcherrima	Poinsettia
ANNUAL	Iberis sempervirens	Candytuft, Cultivars
ANNUAL	Lobelia erinus	Edging Lobelia
ANNUAL	Lobularia maritima	Sweet Alice
ANNUAL	Matricaria recutita	Common Chamomile
ANNUAL	Petunia hybrida	Petunia
ANNUAL	Phacelia tanacetifolia	Phacelia
ANNUAL	Primula polyantha	English Primrose
ANNUAL	Salvia splendens	Scarlet Sage
ANNUAL	Tagetes patula	French Marigold
ANNUAL	Viola wittrockiana	Pansy
ANNUAL	Zinnia elegans	Zinnia

Appendix B: Fire-Prone Plant List

The following plants shall generally be avoided when establishing new landscape designs as to reduce wildfire risk.

TYPE	SCIENTIFIC NAME	COMMON NAME
TREE	Acacia spp.	Acacia species
TREE	Abies spp.	Firs
TREE	Cedrus spp.	Cedars
TREE	Chamaecyparis spp.	False Cypress
TREE	Cupressus spp.	Cypress
TREE	Eucalyptus spp.	Eucalyptus
TREE	Larix spp.	Larch
TREE	Notholithocarpus densiflorus	Tan Oak, Tanbark Oak
TREE	Palms	Palm (if dry fronds)
TREE	Picea spp.	Spruces
TREE	Pinus coulteri	Coulter Pine
TREE	Pinus muricata	Bishop Pine
TREE	Pinus radiata	Monterey Pine
TREE	Pinus sabiniana	Gray Pine
TREE	Pinus serotina	Pond Pine
TREE	Pinus spp.	Pines
TREE	Pinus sylvestris	Scots Pine
TREE	Pinus torreyana	Torrey Pine
TREE	Pseudotsuga menziesii	Douglas-Fir
TREE	Thuja spp.	Arborvitae
TREE	Tsuga spp.	Hemlock
TREE	Umbellularia californica	California Bay
SHURB	Arctostaphylos spp.	Manzanita
SHRUB	Adenostoma fasciculatum	Chamise, Greasewood
SHRUB	Artemisia californica	Coastal Sagebrush
SHRUB	Baccharis spp.	Coyote Brush
SHRUB	Cytisus scoparius	Scotch Broom
SHRUB	Ecchium	Pride of Madeira
SHRUB	Erigonum fasciculatum	California Buckwheat
SHRUB	Genista monspessulana	French Broom
SHRUB	Pickeringia montana	Chaparral Pea
SHRUB	Quercus spp.	Scrub Oak (brushy oaks)
SHRUB	Rosmarinus officinalis	Rosemary
SHRUB	Salvia mellifera	Black Sage
SHRUB	Spartium junceum	Spanish Broom

TYPE	SCIENTIFIC NAME	COMMON NAME
SHRUB	Ulex europea	Gorse
SHRUB	Vaccinium ovatum	Evergreen Huckleberry
TREE/SHRUB	Chrysolepis chrysophylla	Qinquapin,Giant
TREE/SHRUB	Juniperus spp.	Junipers
TREE/SHRUB	Taxus spp.	Yew
GRASS	Cortaderia jubata	Jubata Grass
GRASS	Cortaderia selloana	Pampas Grass
GRASS	Pennisetum spp.	Fountain Grass
SHRUB/GRASS	Bamboo	Bamboo, all species

Appendix C: Design Guidelines Checklist

REVISED APPENDIX FIRE

GUENOC VALLEY WILDFIRE PREVENTION PLAN

MAHÁ

GUENOC VALLEY

WILDFIRE PREVENTION PLAN

FOR THE FIRST PHASE OF THE
MAHA RESORT AT GUENOC VALLEY

INITIAL SUBMISSION: FEBRUARY 5, 2020
REVISED: JUNE 1, 2020

ACKNOWLEDGMENTS

The *Maha Guenoc Valley Wildfire Prevention Plan* was created as part of collaborative effort between the County of Lake, representatives from the California Department of Forestry & Fire Protection (CAL FIRE), design and engineering teams, and grazing consultants. The group relied upon local knowledge and trusted resources to identify the key fire risks throughout the site and then develop an innovative and comprehensive wildfire prevention strategy.

TABLE OF CONTENTS

I. OVERVIEW PG 1
- Goals & Intent
- Comprehensive Wildfire Prevention Site Plan
- Implementation & Management

II. SITE CONTEXT PG 4
- Project Setting & History
- Project Site Plan
- Wildfire History
- Wildfire Risk Factors
  - *Vegetation*
  - *Regional Wind Patterns*
  - *Local Wind Patterns*
  - *Topography*
  - *Aspect*
- Wildfire Risk Severity
- Wildfire Regional Risk

III. GENERAL WILDFIRE PREVENTION PG 15
- General Wildfire Prevention Strategies
- Fire Break Network
- Active Landscape Fire Management
  - *Grazing Practices*
- Irrigated Green Belt

IV. CONSTRUCTION WILDFIRE PREVENTION PG 20
- Responsibilities & Procedures

V. UTILITY WILDFIRE PREVENTION PG 21
- Electric Network
- Propane Gas System

VI. LANDSCAPE WILDFIRE PREVENTION PG 23
- Site Building & Determine Total Defensible Space
- Determine Defensible Zones
- Prepare the Property
- Establish New Landscape
- Manage Landscape to Reduce Risk

VII. BUILDING WILDFIRE PREVENTION PG 28
- Exterior Building Strategies
- Interior Building Strategies

VIII. WILDFIRE PREVENTION PREPAREDNESS PG 30
- Resident Recommendations

IX. WILDFIRE EMERGENCY RESPONSE PG 31
- Wildfire Response Site Plan
- Wildfire Emergency Detection & Communication Systems
- Wildfire Emergency Response Center & Refuge Areas
- Wildfire Water Supply & Suppression System

IX. CONTRIBUTORS & SOURCES PG 35

Note: Site plans throughout this document are intended to demonstrate key wildfire prevention concepts. Final site plans are subject to change; please refer to the tentative and final maps for detailed site plan information, including parcel layouts and circulation alignments.

OVERVIEW

GOALS & INTENT

The Maha Resort at Guenoc Valley is situated in a unique northern California landscape. The site's hills and valleys filled with oak woodlands, grasslands, vineyards, and grazing pastures will create an exceptional visitor and resident experience. Yet, this same setting also presents critical wildfire risks. A development of this size and expense requires a comprehensive approach to protect the environment and buildings from wildfire damage.

The *Maha Guenoc Valley Wildfire Prevention Plan* presents an integrated approach to wildfire management throughout the project site. This plan includes a thorough consideration of the site's wildfire history as well as vegetative, topographic, and climatic wildfire risks. These risk patterns inform a series of essential wildfire prevention strategies for all components of the project. This includes innovative concepts and commitments that will contribute to a wildfire resilient setting. For example, goat, sheep, and cattle will reach many hard-to-access areas of the property to graze dry grasses and reduce understory vegetation, both of which are significant wildfire risk factors. The project site will additionally be protected with fire breaks along the roadway network as well as along unprotected areas of the property boundary. In the case of an actual wildfire, the on-site emergency response system will quickly be deployed–which includes everything from high-definition fire detection cameras to an on-site emergency and fire response center.

These efforts will be part of an overall commitment to developing long-term wildfire resilience through innovative partnerships, research, and strategies. The resort will follow the guidance and establish collaborations with the County of Lake, the California Department of Forestry & Fire Protection (CAL FIRE) and the local fire department, South Lake County Fire, to continuously improve the wildfire prevention plan. These actions will all contribute to the resort's pledge to become a Firewise Community as designated by the National Fire Protection Association (NFPA), which will reinforce the long-term ability to address wildfire risk. With comprehensive and careful planning, Maha Resort at Guenoc Valley will offer a dynamic and effective ability to reduce wildfire risk for all residents, visitors, and workers.

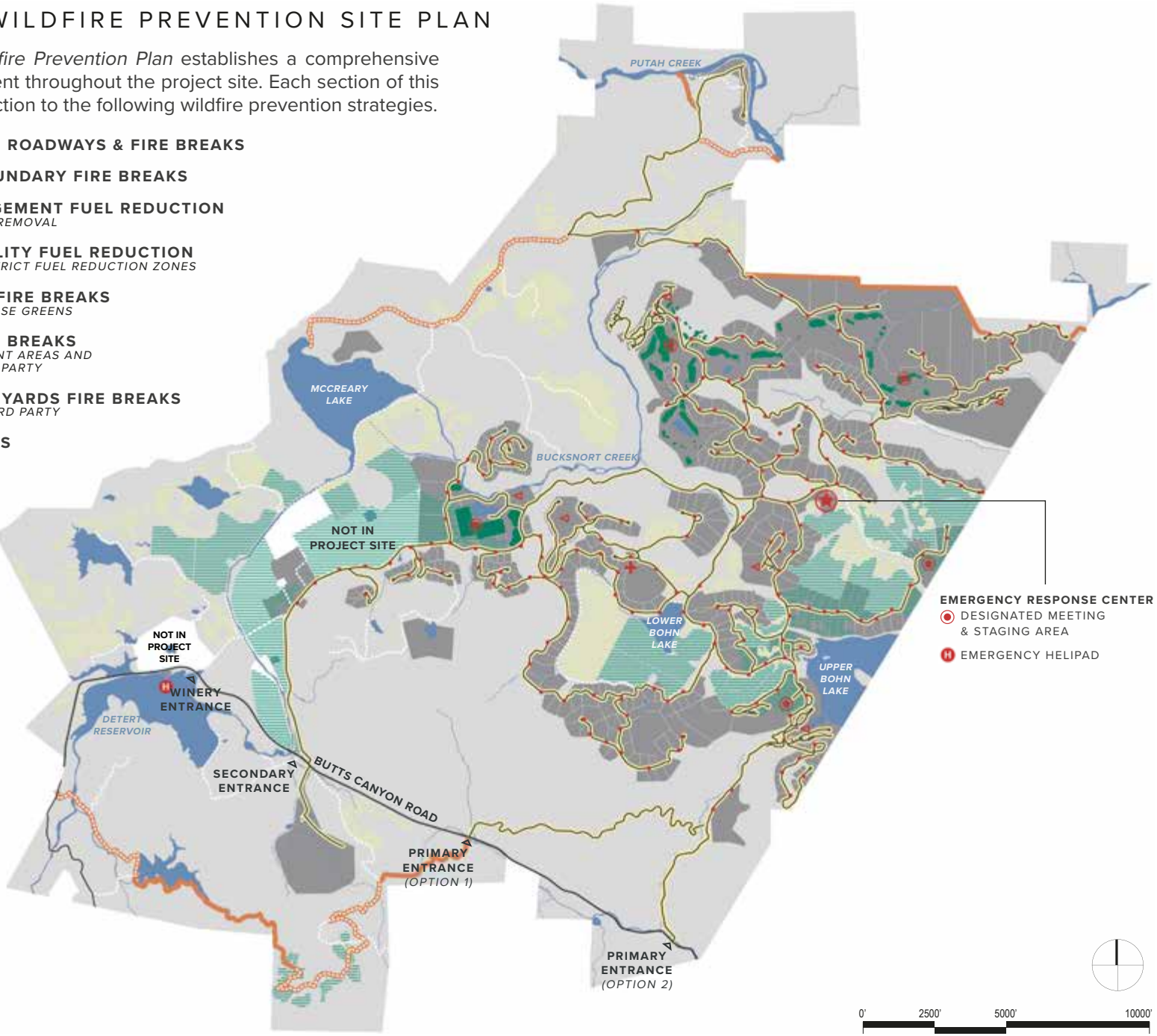
This document was revised to reflect the applicant's commitment to timely implementation of roadway fire breaks upon occupancy and to require primary structures to be equipped with an exterior fire suppression system.

OVERVIEW

COMPREHENSIVE WILDFIRE PREVENTION SITE PLAN

The *Maha Guenoc Valley Wildfire Prevention Plan* establishes a comprehensive approach to wildfire management throughout the project site. Each section of this plan will provide a brief introduction to the following wildfire prevention strategies.

- **PRIMARY TWO-WAY ACCESS ROADWAYS & FIRE BREAKS**
- **VOLUNTARY PROPERTY BOUNDARY FIRE BREAKS**
- **ACTIVE LANDSCAPE MANAGEMENT FUEL REDUCTION**
  GRAZING AND MANUAL VEGETATION REMOVAL
- **RESIDENTIAL/RESORT/FACILITY FUEL REDUCTION**
  STRUCTURE FIRE SPRINKLERS AND STRICT FUEL REDUCTION ZONES
- **IRRIGATED RECREATIONAL FIRE BREAKS**
  EQUESTRIAN FIELDS AND GOLF COURSE GREENS
- **IRRIGATED VINEYARDS FIRE BREAKS**
  CURRENTLY PLANTED IN DEVELOPMENT AREAS AND AREAS LONG-TERM LEASED BY THIRD PARTY
- **POTENTIAL IRRIGATED VINEYARDS FIRE BREAKS**
  IN AREAS LONG-TERM LEASED BY THIRD PARTY
- **EXISTING RANCH ROADWAYS**
  USED FOR ACTIVE FUEL REDUCTION AND EMERGENCY ACCESS
- **EMERGENCY RESPONSE CENTER**
- **EARLY DETECTION SYSTEM**
  HIGH-DEFINITION CAMERA
- **EMERGENCY NOTIFICATION SIREN SYSTEM**
  EXACT LOCATIONS TBD
- **DESIGNATED MEETING & STAGING AREA**
- **HELIPADS**
- **FIRE HYDRANTS**
- **WATER SOURCES**
  RESERVOIRS, LAKES, PONDS, CREEKS & STREAMS



OVERVIEW
IMPLEMENTATION & MANAGEMENT

The *Maha Guenoc Valley Wildfire Prevention Plan* will create a comprehensive framework to guide the plan's continuous development, implementation, and management. Beyond meeting code requirements defined by the County of Lake and the State of California, the project team will work closely with the California Department of Forestry & Fire Protection (CAL FIRE) and the local fire department, South Lake County Fire, to continuously identify strategies to improve the wildfire prevention plan.

The plan will be implemented through the resort's Covenants, Conditions, & Restrictions (CC&Rs), and Guenoc Valley District (GVD) zoning ordinance documents, which will all be overseen by the County of Lake through the development permitting process. The resort's residential homeowner's association (HOA) will provide ongoing maintenance and compliance for this plan.

SITE CONTEXT
PROJECT SETTING & HISTORY

The Maha Resort at Guenoc Valley is located approximately 100 miles north of the Bay Area in the agricultural and viticultural region of North–central California. The resort is located in the southeastern corner of the County of Lake, three miles southeast of Middletown and on Napa County's northern border.

Guenoc Valley, a small inland valley, is comprised of varying landscapes and conditions. The valley experiences greater seasonal temperature extremes than neighboring areas, and has a wide range of elevation changes throughout the property. These varying elevations support various vegetation types and uses; a series of vineyards generally cover the lower areas and slopes, while oak woodlands, grasslands, and chaparral covered hillsides offer plenty of opportunities for livestock grazing.

At approximately 16,000 acres, the resort site remains one of the largest privately owned properties in the state of California. The property first came to public attention when a portion of the ranch was owned by the British Actress, Lillie Langtry. Through the years the land has continued to be utilized for outdoor recreational pursuits, vineyards, and agriculture.

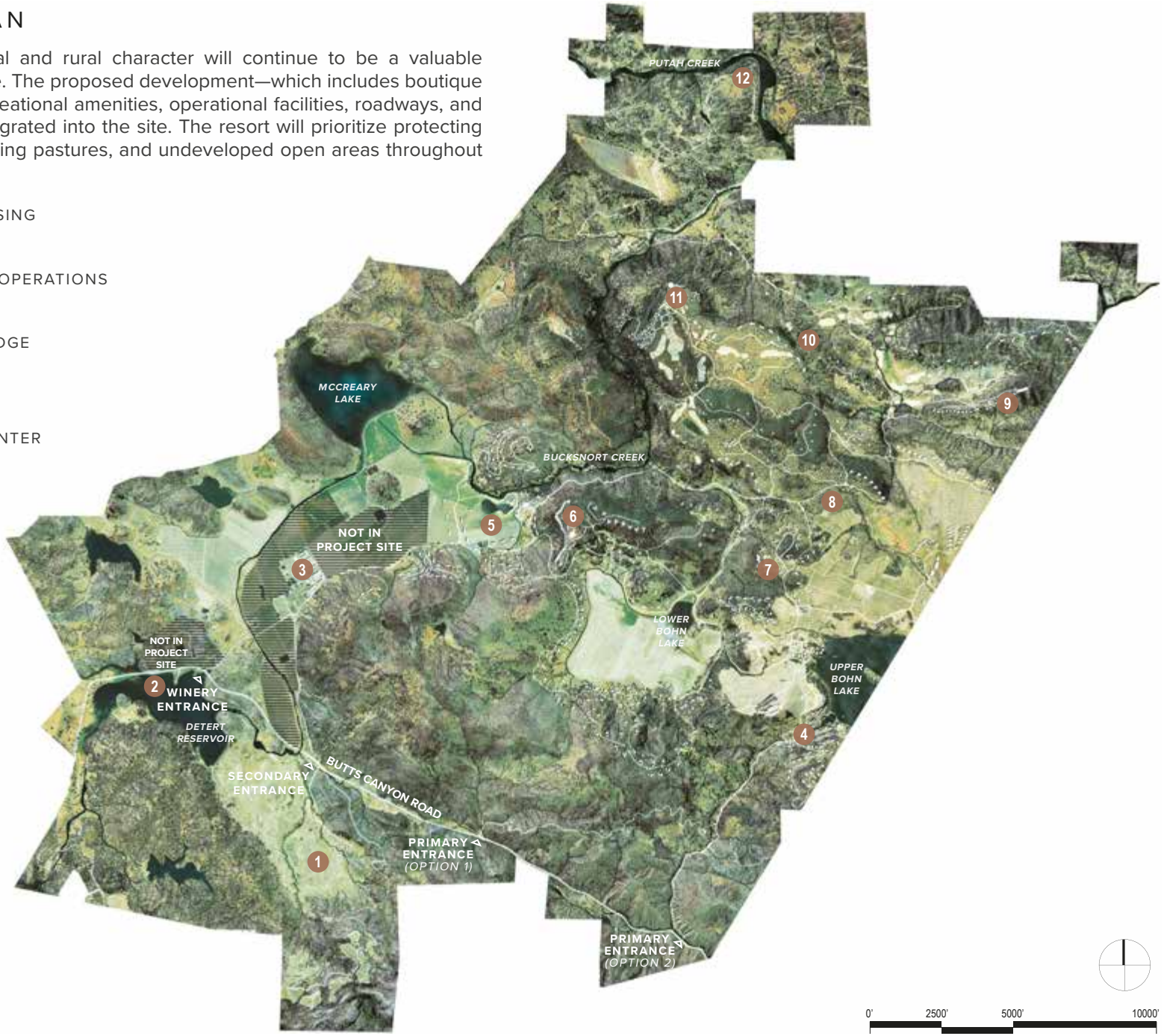
PROJECT SITE LOCATION

In resort site is located approximately 100 miles north of the Bay Area on the border of Napa and Lake County with close access to Clearlake and Santa Rosa.

SITE CONTEXT
PROJECT SITE PLAN

This site's inherent agricultural and rural character will continue to be a valuable aspect of the resort experience. The proposed development—which includes boutique hotels, residential estates, recreational amenities, operational facilities, roadways, and trailways—will be carefully integrated into the site. The resort will prioritize protecting and enhancing vineyards, grazing pastures, and undeveloped open areas throughout the development process.

1 ON-SITE WORKFORCE HOUSING
2 AERIAL SITE ACCESS
3 CENTRAL BACK-OF-HOUSE OPERATIONS
4 MAHA FARM
5 EQUESTRIAN CENTER & LODGE
6 BOHN RIDGE RESORT
7 SPA & WELLNESS
8 EMERGENCY RESPONSE CENTER
9 RESORT AT TROUT FLAT
10 GOLF COURSE
11 DENNISTON GOLF ESTATES
12 TENT CAMP AREA

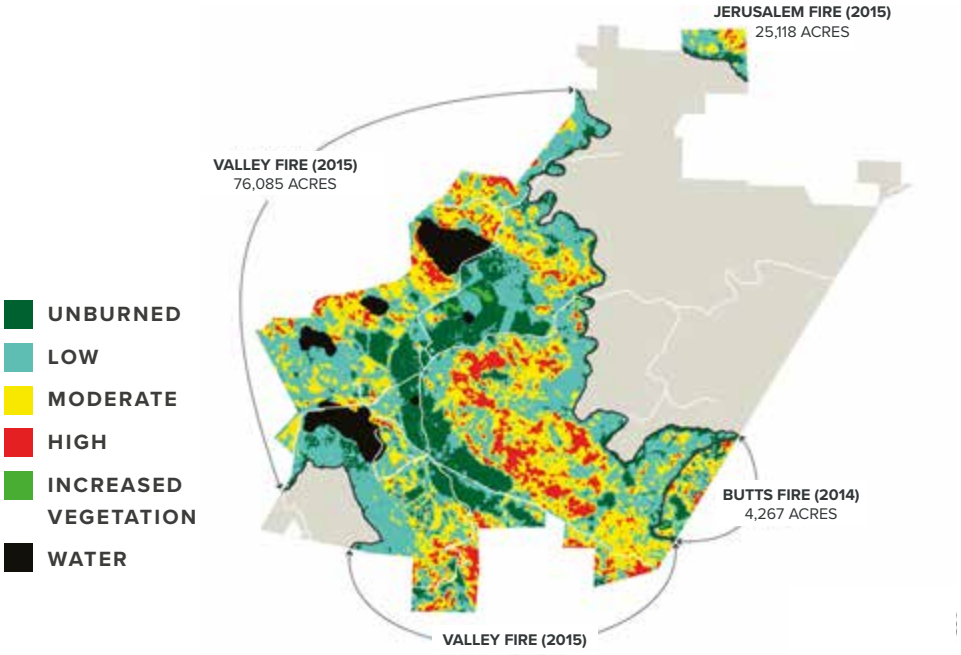


SITE CONTEXT
WILDFIRE HISTORY

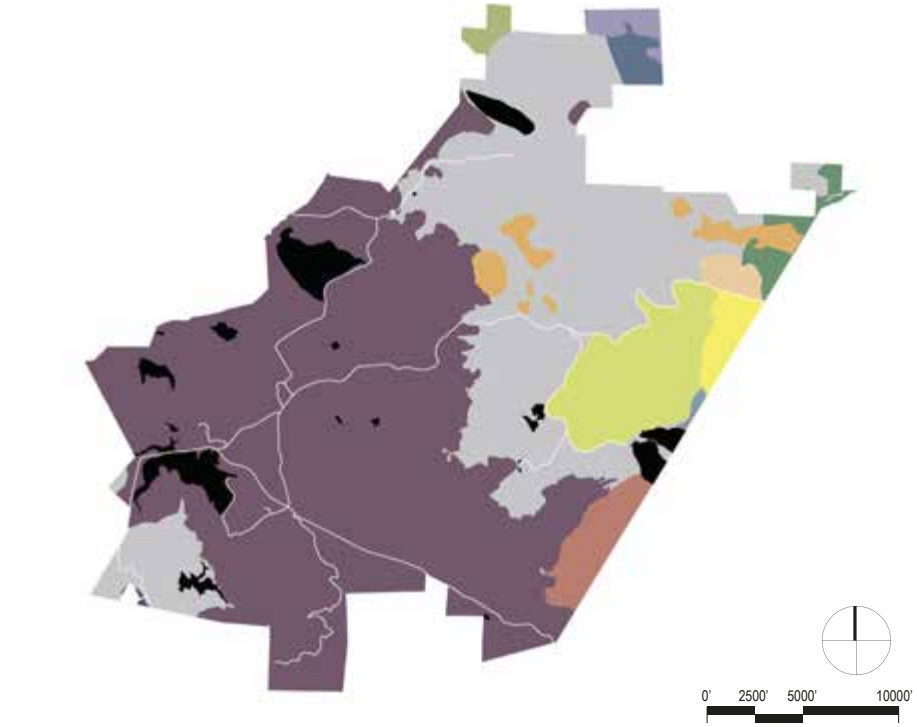
Guenoc Valley is located in a fire prone region of California. Although wildfire is a year-round possibility, risk increases during the late summer into the fall. During this time of the year, hot days with a lack of precipitation dry out vegetation, which increases the risk for wildfire, particularly during windy days. Climate change could further affect these risk factor patterns.

Wildfires have affected the site throughout its history. Since the 1950s, fires of varying size and intensity have burned parts of the project site. A few of the more recent fires, including the Butts Fire in 2014 and the Jerusalem and Valley Fires in 2015, were large-scale fires which spread from off-site and affected large portions of the site as well as nearby properties. In particular, the Valley Fire caused wide-spread damage to the southern portion of the site, including along Butts Canyon Road. These effects are still visible and present today.

The scale, severity, and effects of the most recent wildfires are all important considerations in developing a rigorous wildfire prevention strategy.



BURN SEVERITY OF MOST RECENT WILDFIRES
SOURCE: National Burn Severity Mapping Project, National Park Service - U.S. Geologic Survey, 2014 and 2015



SITE WILDFIRE HISTORY SINCE 1950s
SOURCE: California Fire Return Interval Departure (FRID), USDA Forest Service, Pacific Southwest Region, 2012 with 2016 update

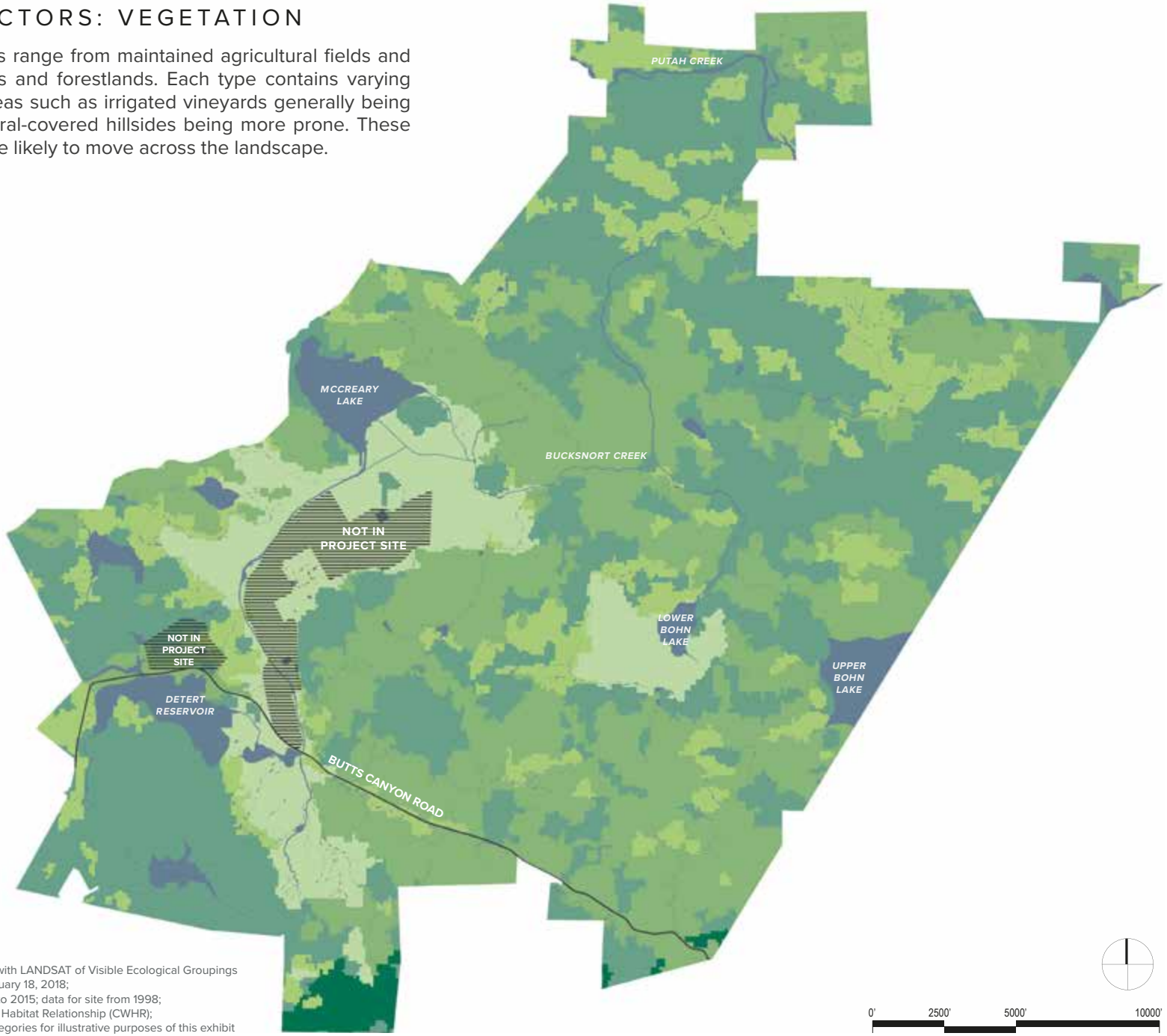
SITE CONTEXT

WILDFIRE RISK FACTORS: VEGETATION

The dominant vegetation types range from maintained agricultural fields and vineyards to dense woodlands and forestlands. Each type contains varying levels of wildfire fuels, with areas such as irrigated vineyards generally being less prone to fires and chaparral-covered hillsides being more prone. These patterns affect how wildfires are likely to move across the landscape.

VEGETATION COVERAGE

- **AGRICULTURE**
- **GRASSLANDS**
- **CHAPARRAL**
- **OAK WOODLANDS**
- **GENERAL FORESTLANDS**
- **WATER**

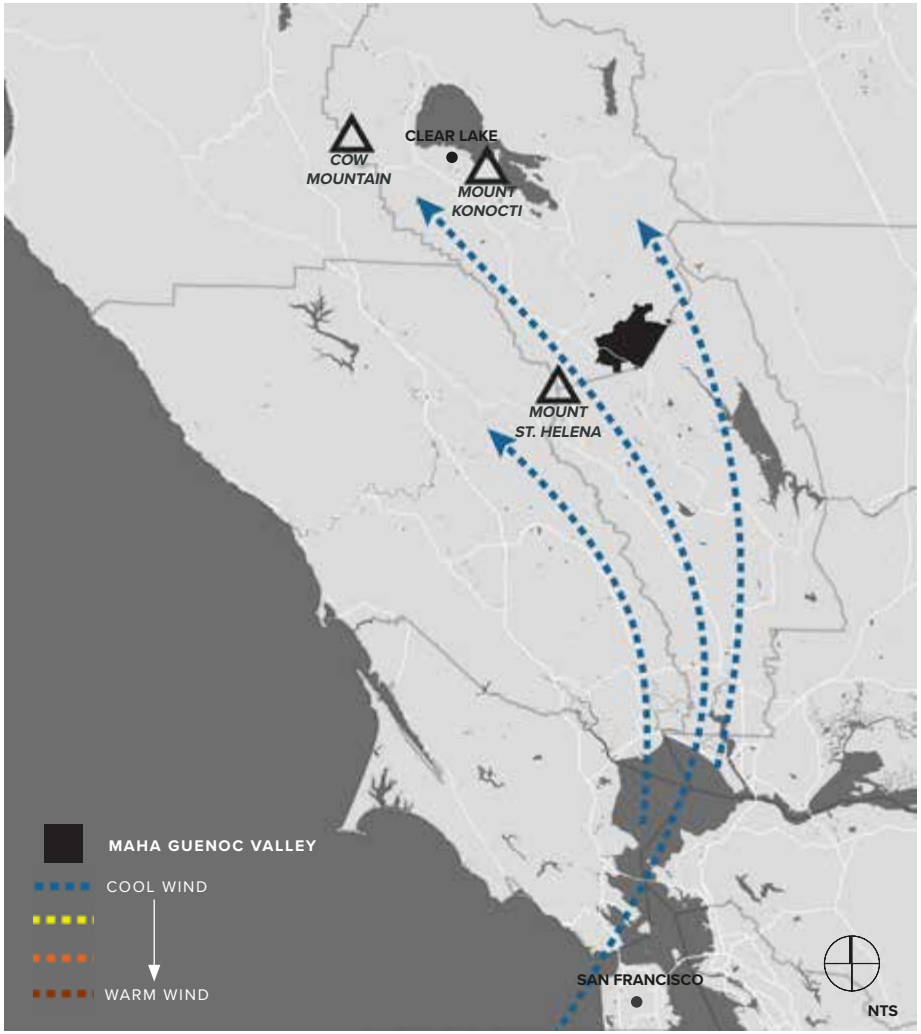


SOURCE:
U.S. Forest Service, Classification and Assessment with LANDSAT of Visible Ecological Groupings (CALVEG), EVeg Mid Region 5 North Coast Mid, January 18, 2018;
data source information ranges from the year 1998 to 2015; data for site from 1998;
data source crosswalked with the California Wildlife Habitat Relationship (CWHR);
CWHR categories simplified to the above seven categories for illustrative purposes of this exhibit

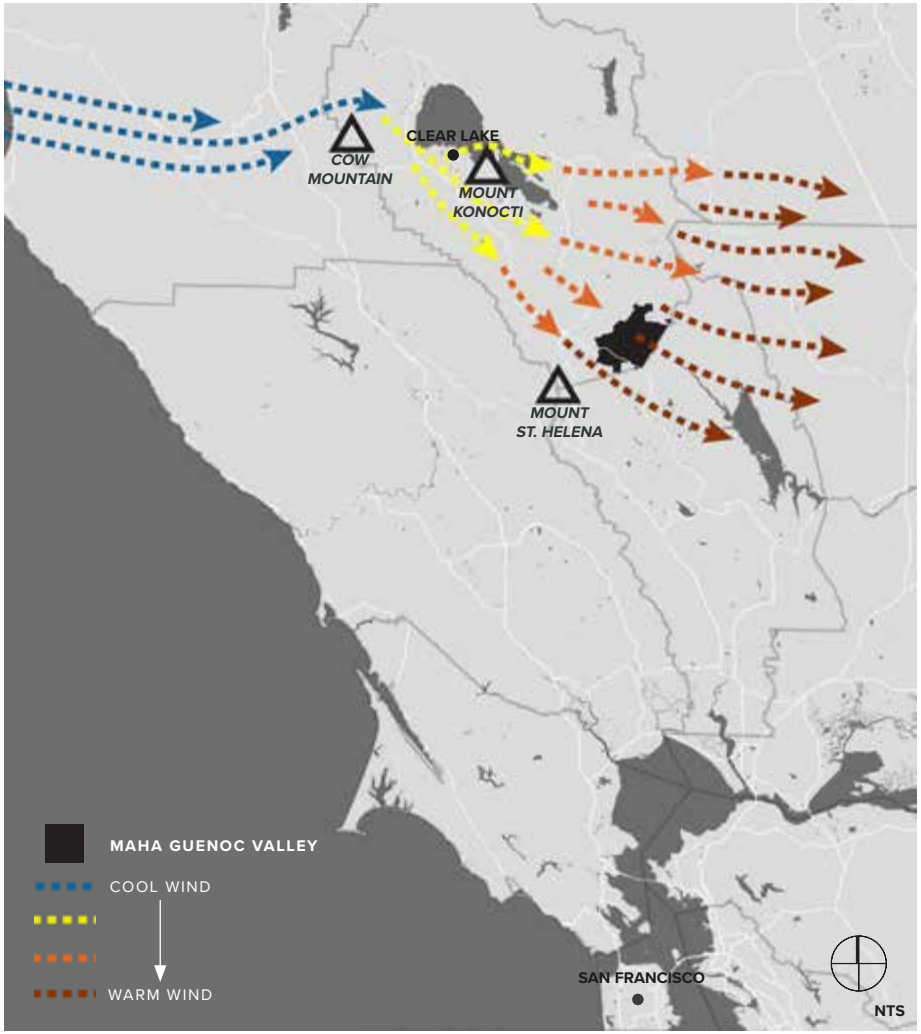
SITE CONTEXT
WILDFIRE RISK FACTORS: REGIONAL WIND PATTERNS

Windy conditions during the fire season increase the likelihood of fires erupting, rapidly escalating, and increasing in intensity and scale. Depending on various climatic conditions, regional wind patterns may vary seasonally and even daily. However, the resort site is primarily affected by two regional wind patterns: the Konocti Winds and Diablo Winds.

The Konocti Winds, as shown below, affect the site with varying morning and afternoon wind patterns. In the morning, wind typically flows northward from the Bay Area. In the afternoon, cool air flows eastward from the coast over Cow Mountain and towards Clear Lake, splits around Mount Konocti, and then increases in speed and temperature as it flows southwards towards Highway 20, Morgan Valley, and Guenoc Valley.



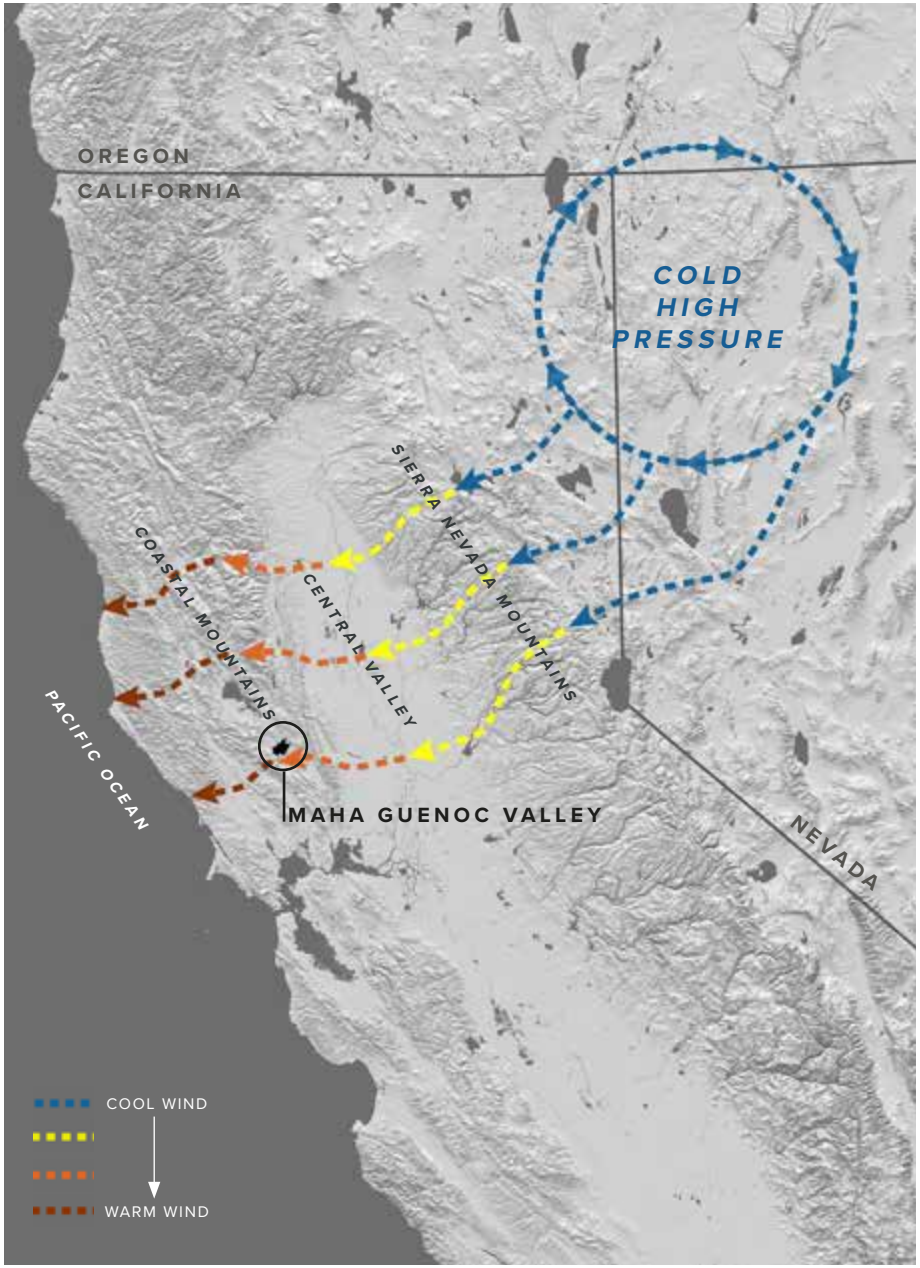
MORNING KONOCTI WIND PATTERNS
SUNRISE – NOON



AFTERNOON KONOCTI WIND PATTERNS
NOON – SUNSET

SOURCE:
South Lake County Fire Protection District and National Weather Service San Francisco Bay Area, 2019

SITE CONTEXT
WILDFIRE RISK FACTORS: REGIONAL WIND PATTERNS



DIABLO WIND PATTERNS

As shown on the right, the resort site is also subject to the Diablo Winds. This wind pattern begins in the Great Basin area of Nevada and Utah. The jet stream pushes cool, high pressure air from the area down to California. Once crossing over and cascading down the Sierra Nevada mountain range, the air increases in temperature and decreases in humidity; the air continues to increase in temperature as it crosses the Central Valley.

Finally, the warm air increases in speed as it pushes between narrow gaps in the Coastal Mountain ranges towards the Pacific Ocean. This pattern primarily affects the region during high fire risk seasons in the fall and winter.

FIRE WEATHER WATHCES & RED FLAG WARNINGS

When certain climate conditions combine, the National Weather Service may issue either a Fire Weather Watch or a Red Flag Warning.

A **Fire Weather Watch** indicates that local conditions resulting in extreme fire could occur in the next 12 - 72 hours. Wildfires are possible, but not imminent or currently occurring.

A **Red Flag Warning**—the highest and most serious type of alert—indicates to residents that local conditions may result in extreme fire behavior within 24 hours. Wildfires are ongoing or may begin shortly.

Various combinations of climate conditions can result in either a watch or warning, including:

- Low relative humidity
- Strong winds
- Dry fuels
- Potential for dry lightening strikes

During both Fire Weather Watches and Red Flag Warnings, residents are urged to practice extreme caution, as major wildfires could be started with a simple spark.

SOURCE:
California Department of Forestry & Fire Protection, “Red Flag Warning & Fire Weather Watches,” 2019
National Oceanic and Atmospheric Administration: National Weather Service, “Understanding Wildfire Warnings, Watches and Behavior,” 2019
San Francisco Chronicle, “Are infamous Diablo winds responsible for recent wildfires?,” 2019

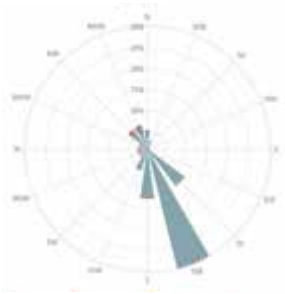
SITE CONTEXT

WILDFIRE RISK FACTORS: LOCAL WIND PATTERNS

While affected by the larger Konocti and Diablo wind patterns, the resort site's topography and microclimates also contribute to unique wind conditions. The wind patterns shown in this map are based on three local wind stations and demonstrate a likely wind condition for a typical day during the July through November fire season. Depending on a variety of climatic conditions, local wind patterns could easily change direction and speed and affect the spread of potential wildfires.

WIND DIRECTION

1 LOWER BOHN

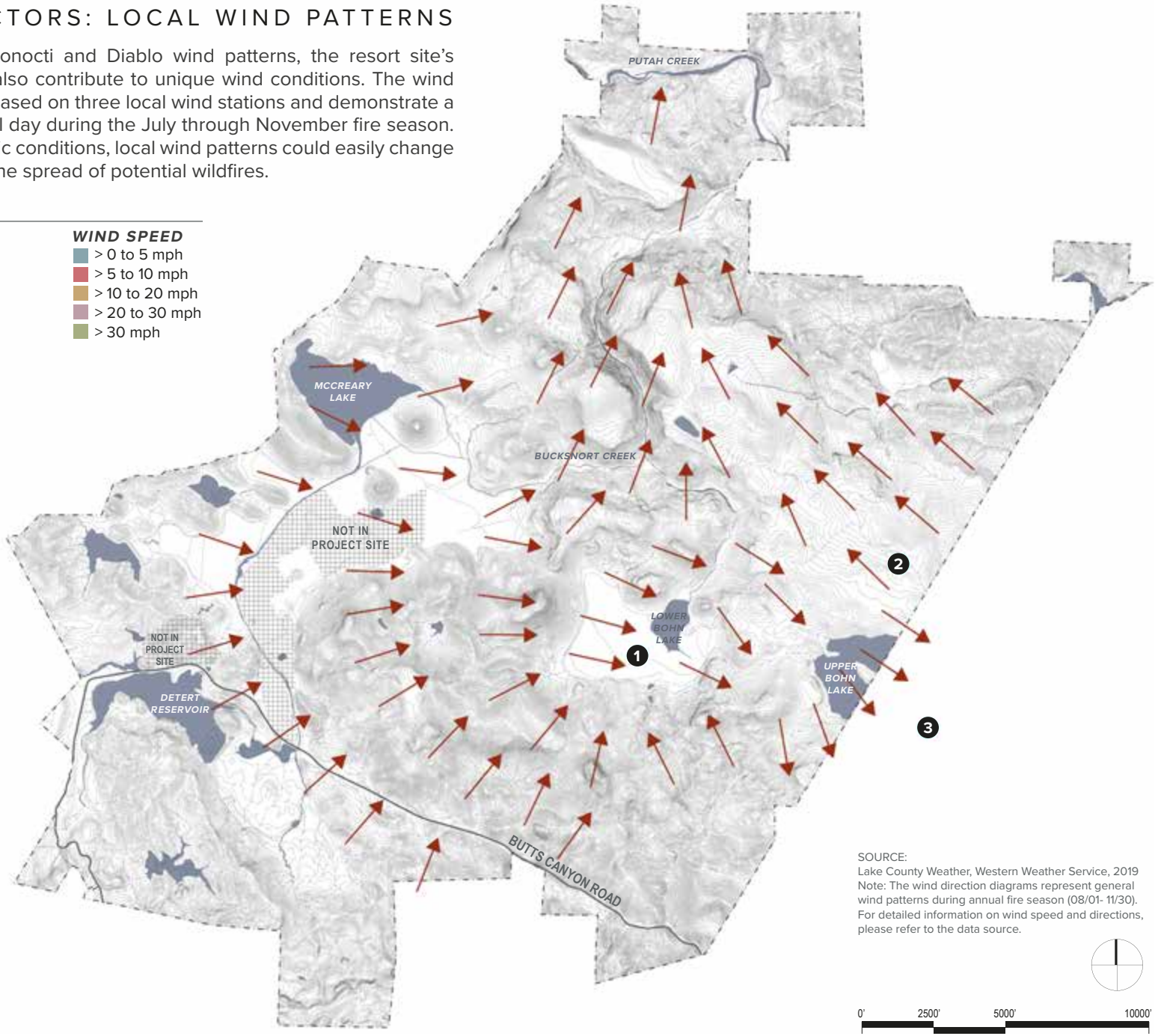


2 UPPER BOHN NORTH

3 UPPER BOHN SOUTH

WIND SPEED

- > 0 to 5 mph
- > 5 to 10 mph
- > 10 to 20 mph
- > 20 to 30 mph
- > 30 mph



SOURCE:
Lake County Weather, Western Weather Service, 2019
Note: The wind direction diagrams represent general wind patterns during annual fire season (08/01- 11/30). For detailed information on wind speed and directions, please refer to the data source.

0' 2500' 5000' 10000'

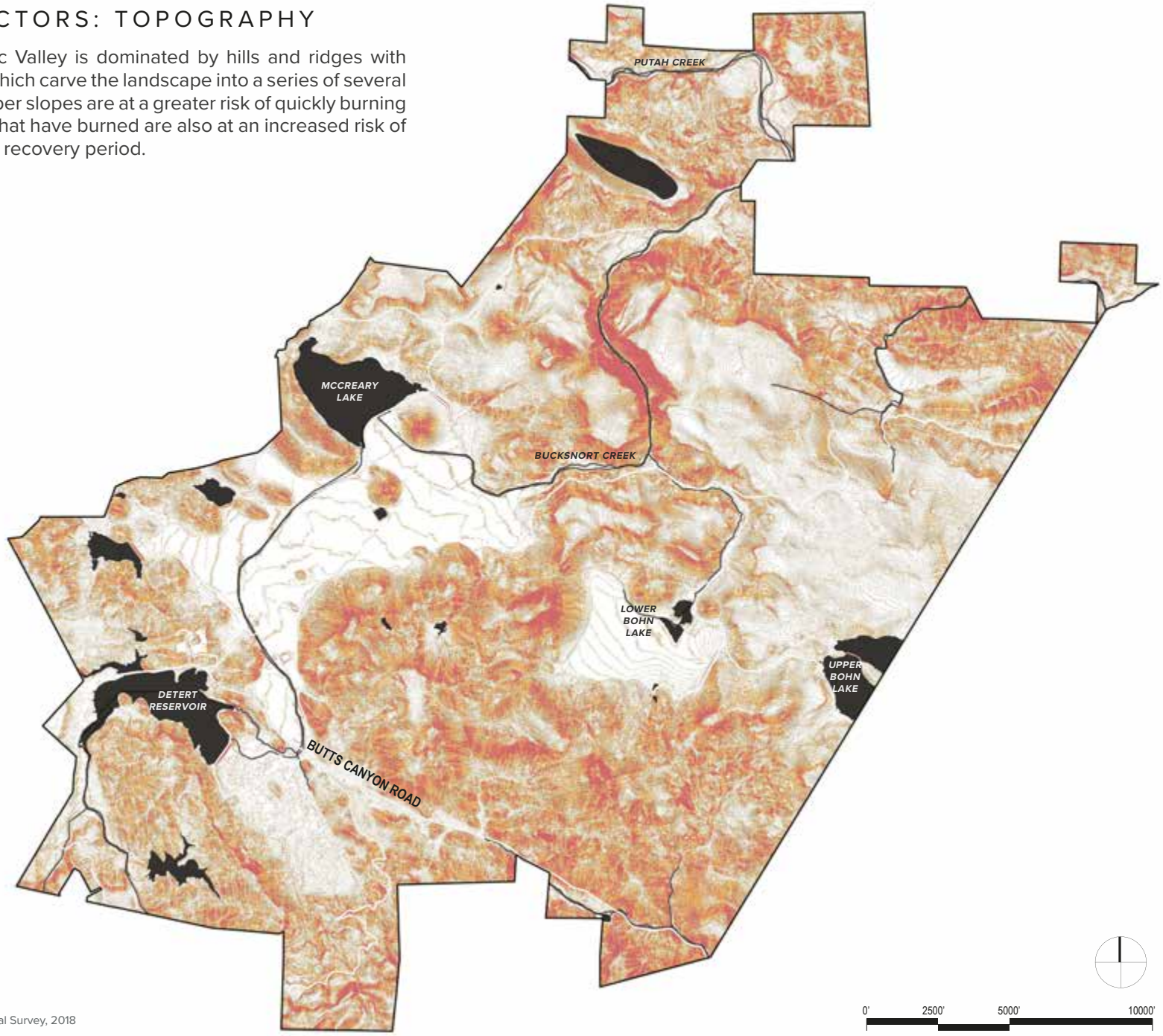
SITE CONTEXT

WILDFIRE RISK FACTORS: TOPOGRAPHY

A significant portion of Guenoc Valley is dominated by hills and ridges with slopes exceeding 30 percent, which carve the landscape into a series of several smaller valleys. Areas with steeper slopes are at a greater risk of quickly burning during a wildfire. Steep slopes that have burned are also at an increased risk of erosion during the post-wildfire recovery period.

SLOPE PERCENTAGE

- 0-5%
- 5-10%
- 10-20%
- 20-30%
- 30-50%
- 50%+



SOURCE:
1 meter Digital Elevation Model (DEM), U.S. Geological Survey, 2018

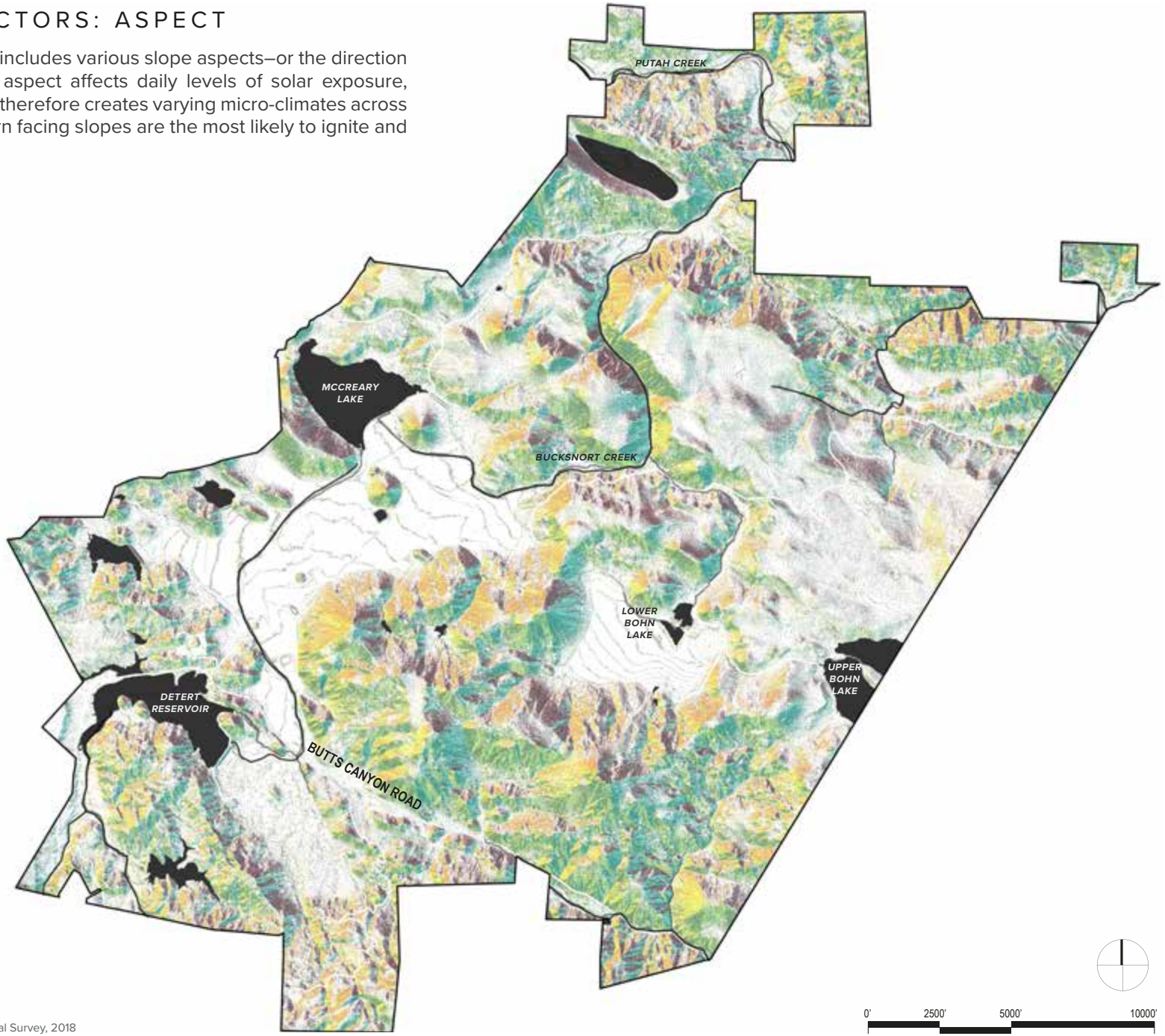
SITE CONTEXT

WILDFIRE RISK FACTORS: ASPECT

The resort site's diverse terrain includes various slope aspects–or the direction that a slope faces. The slope aspect affects daily levels of solar exposure, humidity, and temperature, and therefore creates varying micro-climates across the site. South and southwestern facing slopes are the most likely to ignite and burn.

ASPECT

- FLAT
- NORTH
- NORTHEAST
- EAST
- SOUTHEAST
- SOUTH
- SOUTHWEST
- WEST
- NORTHWEST



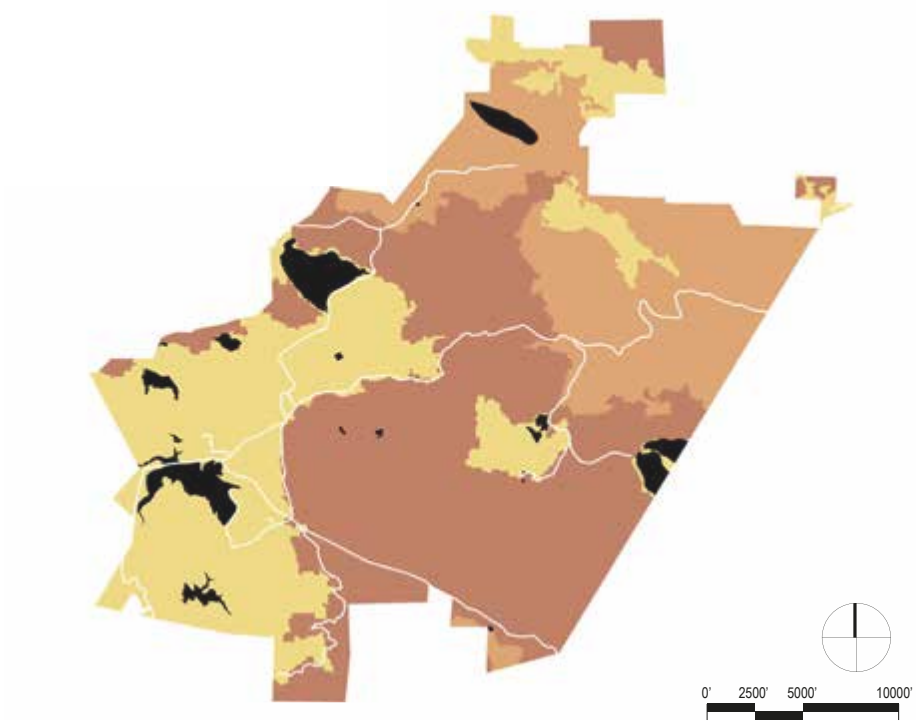
SOURCE:
1 meter Digital Elevation Model (DEM), U.S. Geological Survey, 2018

SITE CONTEXT
WILDFIRE RISK SEVERITY

The specific factors that affect wildfire risk are complicated. A wide range of topographic and landscape conditions create a complex environment to predict and prepare for potential wildfires.

Various risk factors—including those described in the preceding pages—are considered in developing CAL FIRE's Fire Hazard Severity Zones rating system and map. This rating system situates the resort site in a moderate to very high severity zone. The highest risk areas are in the southeast and central parts of the site. These areas have the steepest slopes, are more likely to have a chaparral vegetation coverage, and are exposed to northern-moving winds.

Given the connection between fire risk and slopes, the site's lower risk locations tend to be the flatter valley areas to southwest and northeast. This risk is further reduced where the land is more actively cultivated with vineyards and others farming practices. The areas around the site's many water bodies also generally have a lower risk severity.



FIRE HAZARD SEVERITY ZONES

SOURCE: Lake County Fire Hazard Severity Map, CAL FIRE, 2007

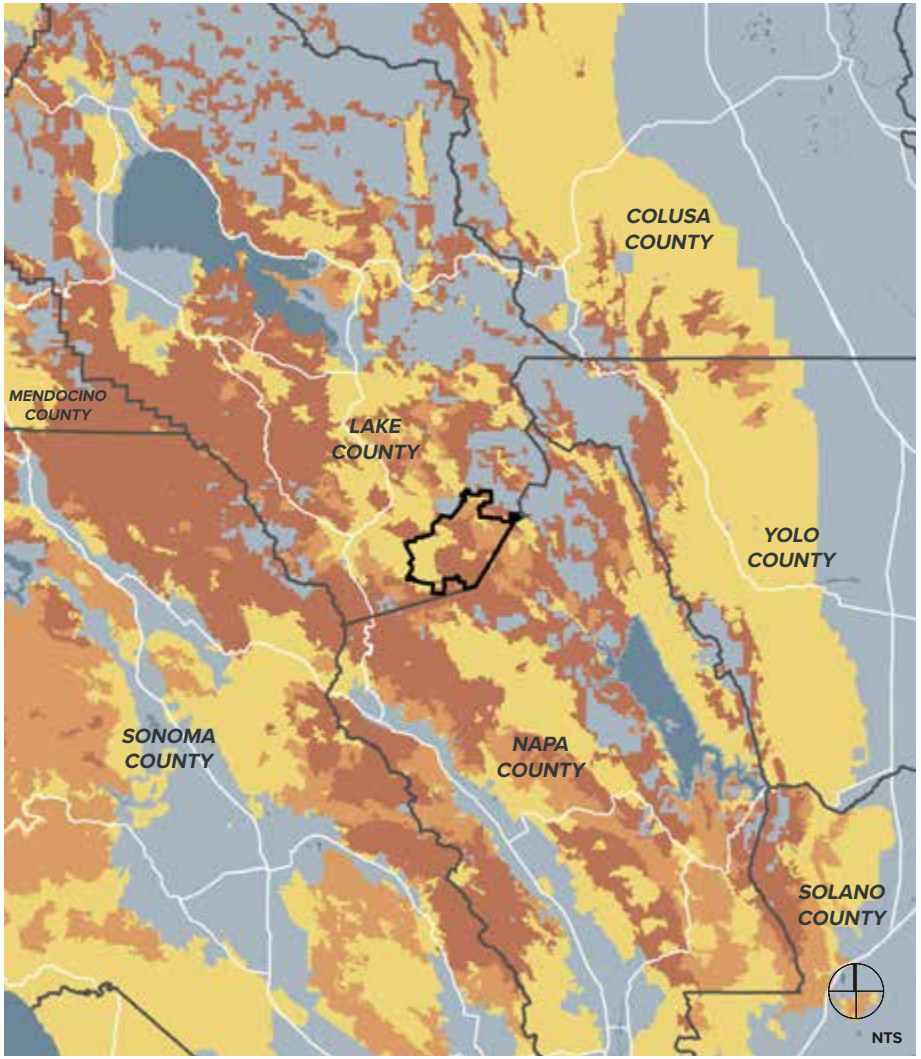
- MODERATE SEVERITY
- HIGH SEVERITY
- VERY HIGH SEVERITY

SITE CONTEXT
WILDFIRE REGIONAL RISK

Cataloging environmental risks is the first step to successfully develop a wildfire prevention plan. However, even with the best research and preparation within the site, fires on neighboring properties can rapidly move across the property boundaries.

While Guenoc Valley's setting is an inherent part of its attraction, the surrounding rural landscapes can also increase the site's wildfire risk. The property is bordered by ranches, pastures, woodlands, and forests with various levels of fire hazard severity. The northern edge of the property is adjacent to the Snow Mountain National Monument, an area of land stretching across approximately 330,000 acres and managed by the Bureau of Land Management (BLM).

The minimally managed landscapes within these neighboring areas tend to have less rigorous wildfire prevention practices, which can result in larger fuel reserves. As detailed in the following pages, additional precautions will be taken along the property boundaries where the risk of fires spreading onto the site is greater.



FIRE HAZARD SEVERITY ZONES

SOURCE: California Fire Hazard Severity Map, CAL FIRE, 2007

- *MAHA GUENOC VALLEY*
- FEDERAL OR LOCAL RESPONSIBILITY AREA
- MODERATE SEVERITY
- HIGH SEVERITY
- VERY HIGH SEVERITY

GENERAL WILDFIRE PREVENTION

GENERAL WILDFIRE PREVENTION STRATEGIES

In order to retain the resort site's inherent rural quality, a low-impact design plan prioritizes limited buildings, roadways, or infrastructure. Undeveloped areas will be managed to reduce wildfire risk through the following strategies:

- **Fire Breaks**
  Fire breaks will be established and maintained along all roadway corridors as well as vulnerable property boundary edges.

- **Active Landscape Management**
  Fields, pastures, woodlands will be actively managed to reduce fire risk. These areas will be continuously grazed with a rotation of cattle, sheep, and goat livestock. In certain locations, dead or fire-prone vegetation may also be manually thinned or removed with machinery and crews.

- **Irrigated Green Belt**
  Vineyards, orchards, gardens, and recreational fields—as well as irrigated residential, resort, and facility landscapes—will all become part of a site-wide irrigated green belt.

FIRE BREAKS

DISRUPT FIRE PATHWAYS

A network of fire breaks will be developed throughout the site, especially along roadways; they will be established and maintained as phases are built.

ACTIVE LANDSCAPE MANAGEMENT

LOP & SCATTER

This involves thinning and removing flammable and dead vegetation through felling and cutting; material is then distributed across the ground.

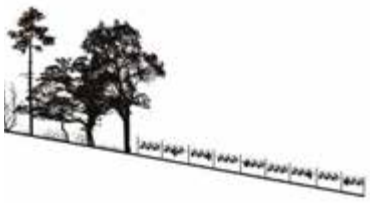
MASTICATE

Flammable and dead vegetation is thinned and removed with chopping, grinding, and mowing; material is then scattered across the ground.

GRAZE WITH LIVESTOCK

Sheep, goat, and cattle livestock will graze understory grasses and vegetation; the livestock will continuously rotate throughout the property.

IRRIGATED GREEN BELT

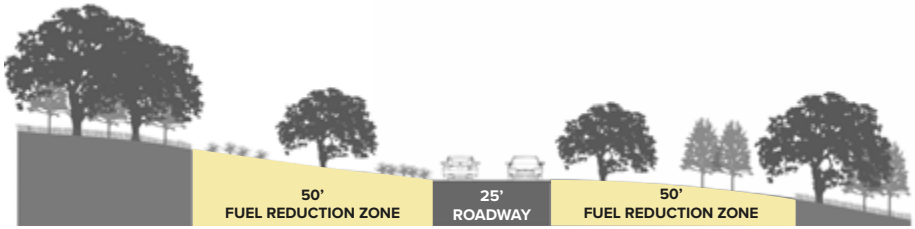


CONNECT IRRIGATED AREAS

Where feasible, contiguous green belts with irrigated farmlands, landscapes, and recreational fields will be developed.

GENERAL WILDFIRE PREVENTION
FIRE BREAK NETWORK

TYPICAL ROADWAY FIRE BREAK



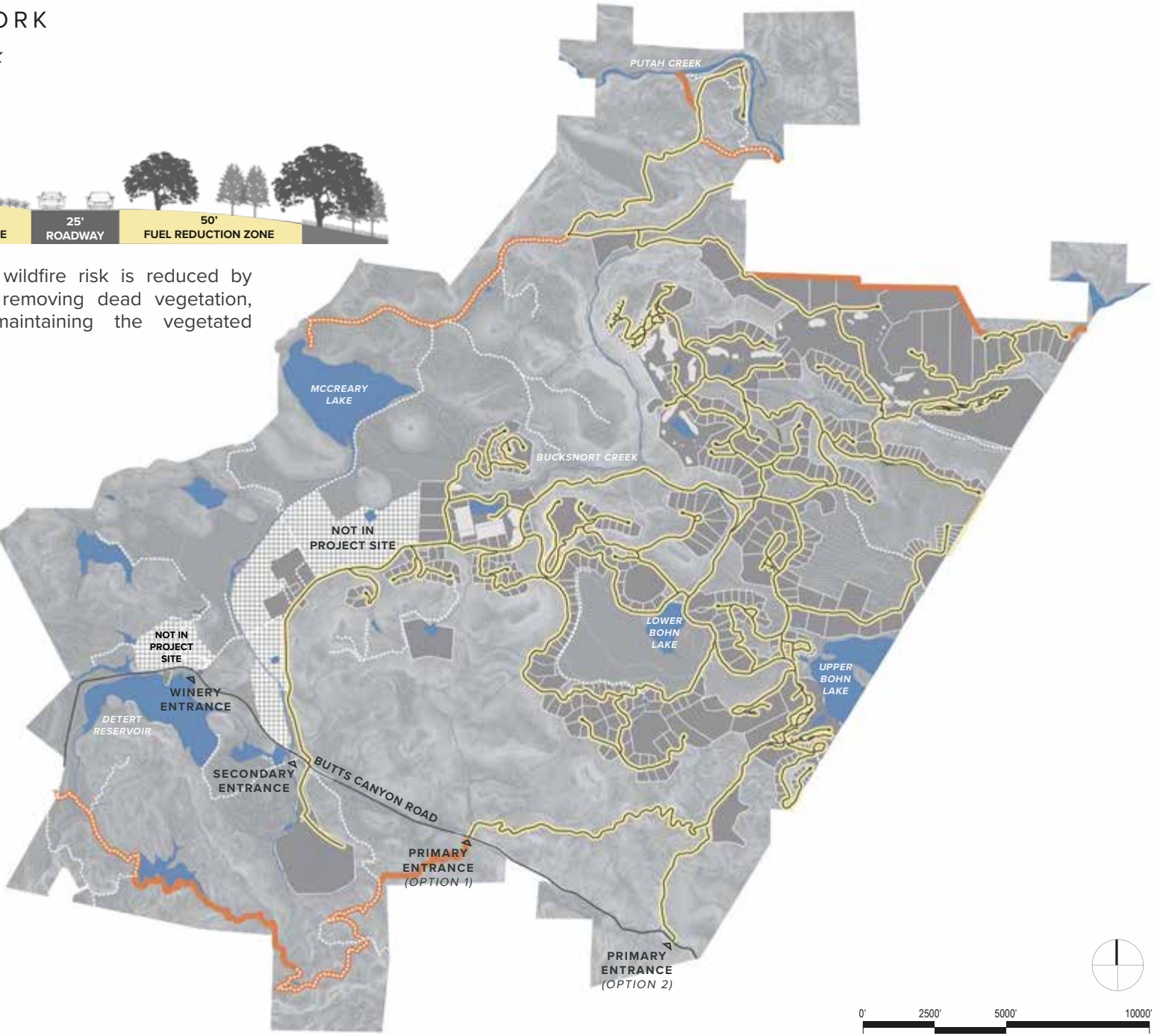
Fire breaks are areas where wildfire risk is reduced by strategies such thinning and removing dead vegetation, separating canopies, and maintaining the vegetated understory through grazing.

All roadways will be bordered on each side by a fuel reduction zone. As an overall defense strategy, 100 foot wide fire breaks could also be established and maintained at select vulnerable areas of the property boundary.

At final occupancy of each structure the applicable fire break shall be installed. Further, at the time of the recording of the last final map for each of the five subdivision groups (Bohn Ridge Subdivision, Equestrian Subdivision, Maha Farms Subdivision, Denniston Golf Estates Subdivision, and Trout Flat Subdivision), the full roadway fire break network shall be completed within that subdivision.

PRIMARY TWO-WAY ACCESS ROUTES & ROADWAY FIRE BREAKS

VOLUNTARY PROPERTY BOUNDARY FIRE BREAKS



GENERAL WILDFIRE PREVENTION
ACTIVE LANDSCAPE FIRE MANAGEMENT

The resort's landscapes will be actively managed to reduce fire risk. This will be achieved through a two-part strategy. First, livestock grazing will be heavily relied upon to reduce fire risk (see next page). Grazing will primarily take place within the site's undeveloped rural landscapes; where feasible and permissible, grazing may also be used to manage landscapes within resort, residential, and facility parcels as well as within vineyards.

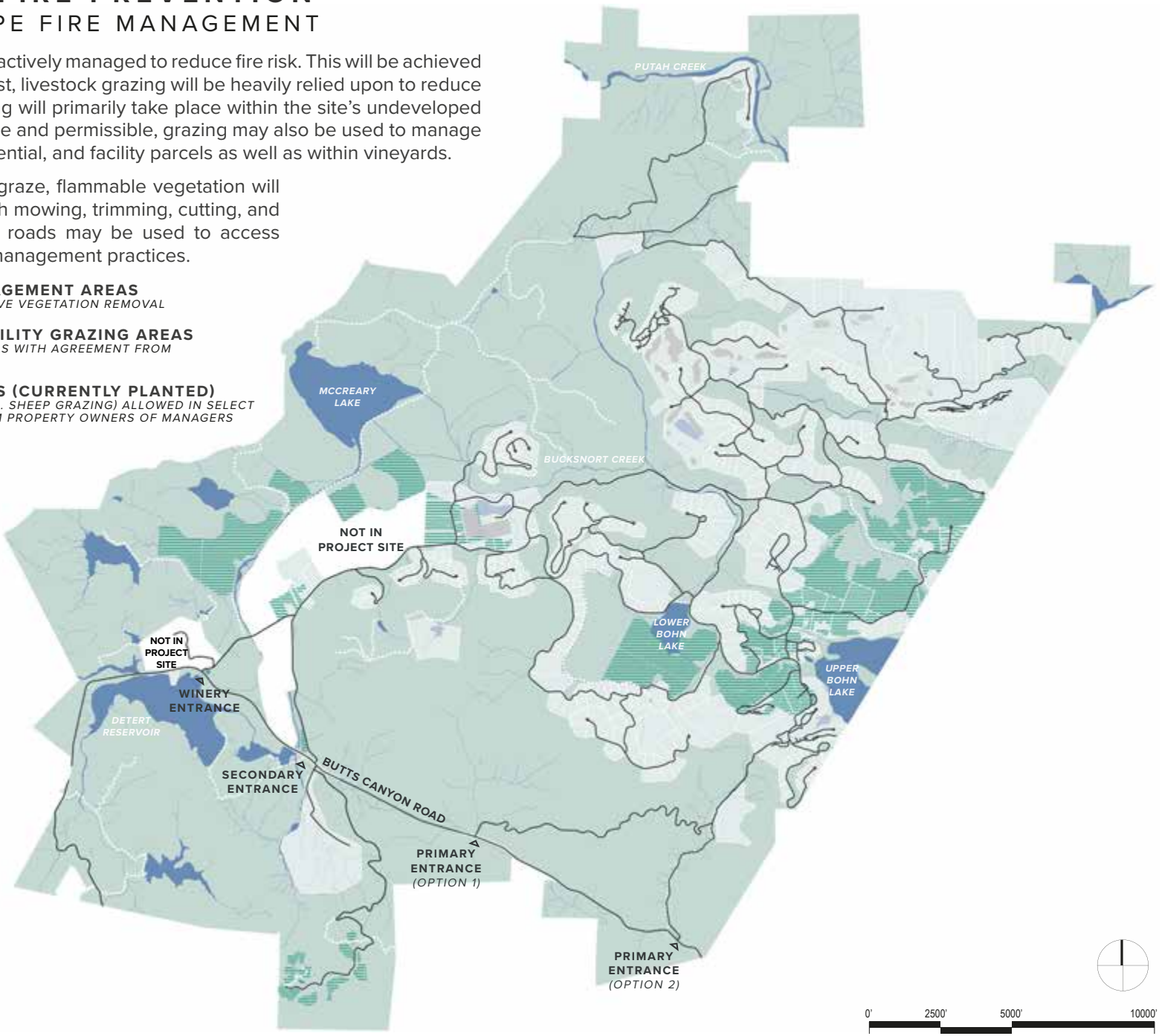
In areas that are infeasible to graze, flammable vegetation will be manually addressed through mowing, trimming, cutting, and brush removal. Existing ranch roads may be used to access more remote areas for active management practices.

ACTIVE LANDSCAPE MANAGEMENT AREAS
CONTINUED GRAZING AND SELECTIVE VEGETATION REMOVAL

RESIDENTIAL/RESORT/FACILITY GRAZING AREAS
GRAZING ALLOWED IN SELECT AREAS WITH AGREEMENT FROM PROPERTY OWNERS OR MANAGERS

VINEYARD GRAZING AREAS (CURRENTLY PLANTED)
MINIMALLY IMPACTFUL GRAZING (I.E. SHEEP GRAZING) ALLOWED IN SELECT VINEYARDS WITH AGREEMENT FROM PROPERTY OWNERS OF MANAGERS

EXISTING RANCH ROADS



GENERAL WILDFIRE PREVENTION
GRAZING PRACTICES

As a key component of the active landscape management plan, goat, sheep, and cattle livestock will continuously rotate throughout the resort site to reduce and remove overgrown and dead vegetation.

As these animals are capable of moving around difficult terrain, allowing them to graze throughout the site will ensure that hard-to-reach areas are regularly maintained. And, as each of these species prefers different types of vegetation, a regular rotation will broaden the types of flammable vegetation that are reduced and removed.

The following matrix provides general standards of site-wide, long-term grazing practices. Although the exact configuration of grazing areas and corridors may shift over time, these general parameters will help to coordinate the placement and movement of herds throughout the site.

Species	**Primary Foraging Behavior**	**Equivalent Animal Unit** *	**Preferred Vegetation**	**Minimum Practical Grazing Area** (Acres) **	**Maximum Practical Grazing Slope** (Percent %) (Wet Ground / Dry Ground)	**Maximum Density** (lbs per acre) (Wet Ground/Dry Ground) ***	**Grazing Season**	**Herd Type**
Goats	Browsing	0.2	Chaparral, Brush, Poison Oak, Weeds	0.15 AC	60% / 80%	15,000 lbs / 60,000 lbs	April - October	Seasonal/ Contracted
Sheep	Grazing	0.2	Oak Woodland/ Grassland, select weeds	0.15 AC	60% / 80%	15,000 lbs / 60,000 lbs	April - June	Seasonal/ Contracted
Cattle	Grazing	1.0	Oak Woodland/ Grassland	0.5 AC	50% / 70%	10,000 lbs / 50,000 lbs	Year Round	Resident

* "Equivalent Animal Units" establishes a consistent unit factor to compare herd sizes; for example, a herd of 10 cows (1.0 AU) is equivalent to a herd of 50 goats (0.2 AU)

** The "Minimum Practical Grazing Area" is significantly dependent on herd size; these minimum practical grazing areas assume that herd sizes will remain equally small in order to accommodate efficient grazing in and around small spaces between buildings and roads.

*** The "Maximum Density" is the maximum collective herd weight supported per graze-able acre

GENERAL WILDFIRE PREVENTION
IRRIGATED GREEN BELT

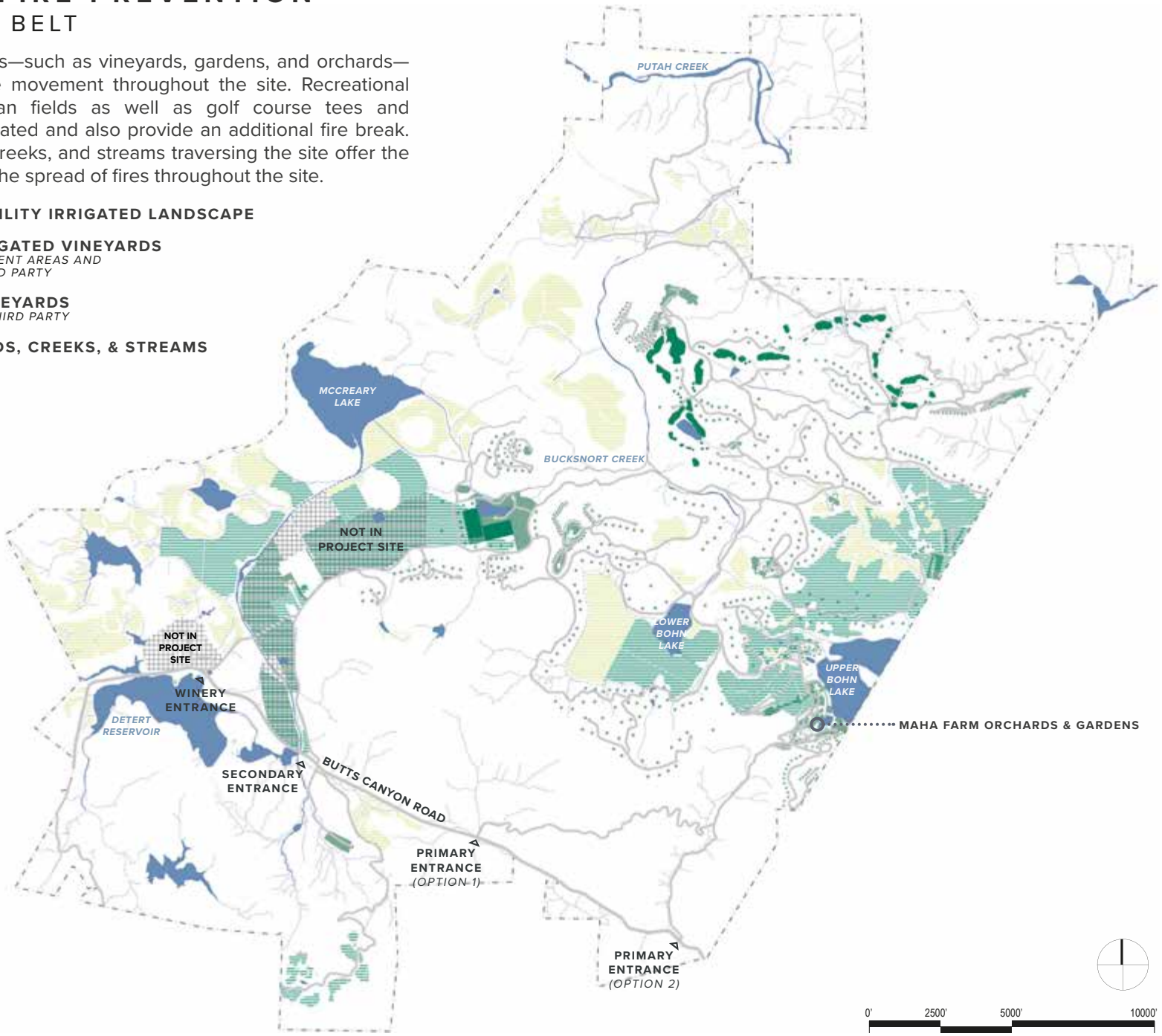
Irrigated agricultural operations—such as vineyards, gardens, and orchards—will interrupt potential wildfire movement throughout the site. Recreational amenities—including equestrian fields as well as golf course tees and fairways—will be regularly irrigated and also provide an additional fire break. The reservoirs, lakes, ponds, creeks, and streams traversing the site offer the additional benefit of reducing the spread of fires throughout the site.

RESIDENTIAL/RESORT/FACILITY IRRIGATED LANDSCAPE

CURRENTLY PLANTED IRRIGATED VINEYARDS
CURRENTLY PLANTED IN DEVELOPMENT AREAS AND AREAS LONG-TERM LEASED BY THIRD PARTY

POTENTIAL IRRIGATED VINEYARDS
IN AREAS LONG-TERM LEASED BY THIRD PARTY

RESERVOIRS, LAKES, PONDS, CREEKS, & STREAMS



CONSTRUCTION WILDFIRE PREVENTION

RESPONSIBILITIES & PROCEDURES

Construction practices will be carefully monitored to ensure that operations which could ignite a wildfire are minimized to the greatest extent possible.

Fire Safety Oversight and Responsibilities

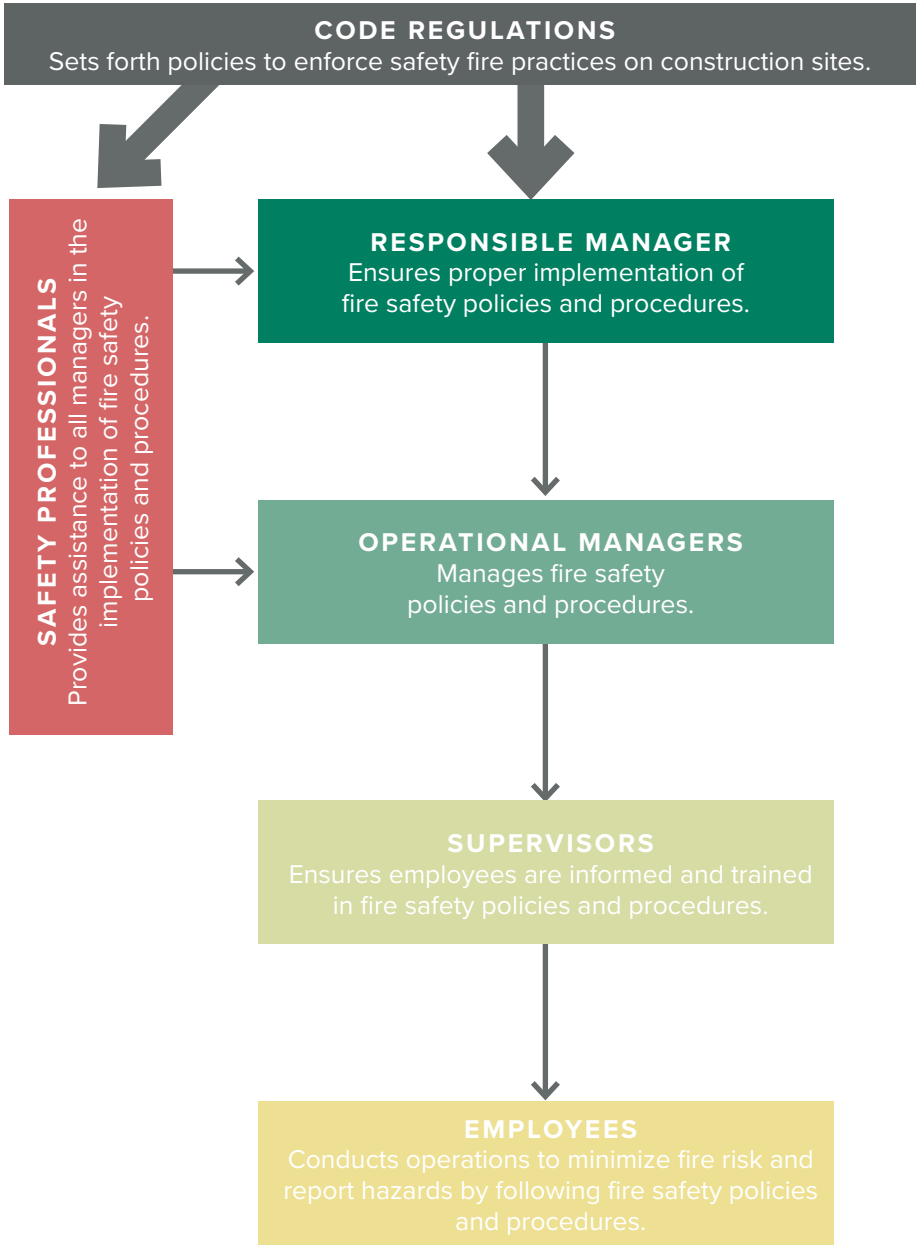
Beyond set code regulations, the project's general contractor has established fire prevention and protection procedures for every level of management and employment (see flowchart). This includes the following:

- Safety Professionals will advise and assist the Responsible and Operational Managers in charge of the project on fire safety;
- Supervisors–as advised by the Safety Professionals–will play a pivtol role in ensuring employees are informed and trained in fire safety. They will often conduct workforce training to educate employees about the fire hazards associated with specific tasks. They will also approve and carefully monitor any hot work or the use of temporary portable heaters. Supervisors will ensure that fire extinguishing equipment is present on all work sites and regularly inspected; and
- All managers and employees will be well-informed on procedures to immediately report fires.

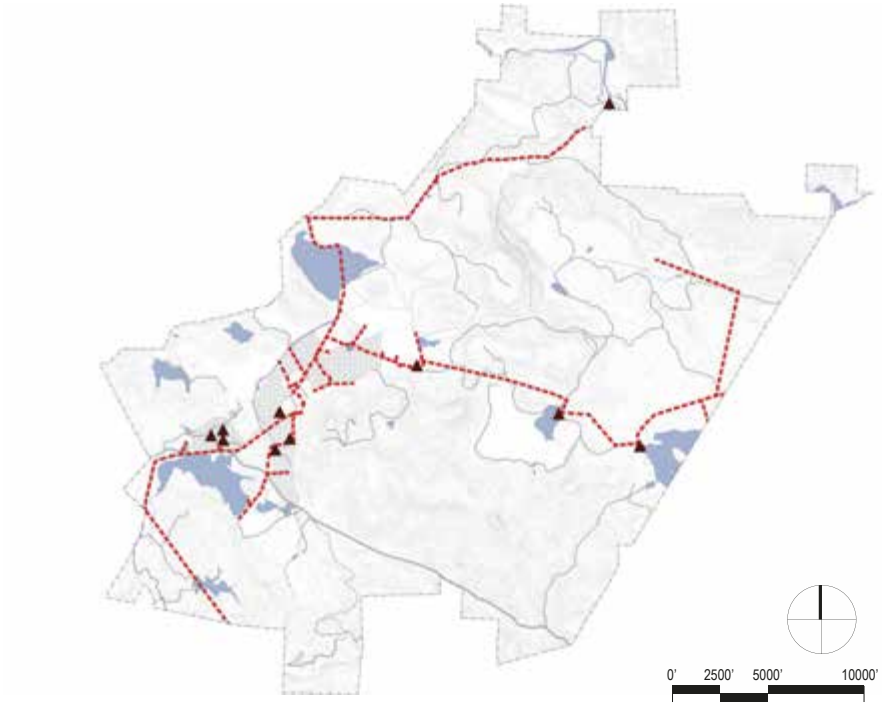
Fire Safety Procedures

During wildfire season, there is a heightened risk of construction-caused fires. In particular, heavy machinery has the potential to ignite fires during site preparation, preliminary grading, and utility line establishment. In order to mitigate fire risk during construction, the local CAL FIRE unit has recommended the following fire safety procedures, among others:

- One round-tip shovel and one water fire extinguisher should be available within 10 feet of all work areas;
- Portable fire extinguishers should be kept in every construction vehicle and piece of equipment;
- Vegetation within the work area should generally be mowed by noon during wildfire season or whenever wildfire conditions are present;
- Hot work should establish a wildfire watch for the duration of work and for 30 minutes after;
- Everyone working on-site should be aware of their location within the project in the event that they must report a fire;
- Everyone working on-site should have access to a cell phone or radio system to report a fire; and
- Everyone working on-site should have access to a pressurized air horn available to alert others in case of an emergency.



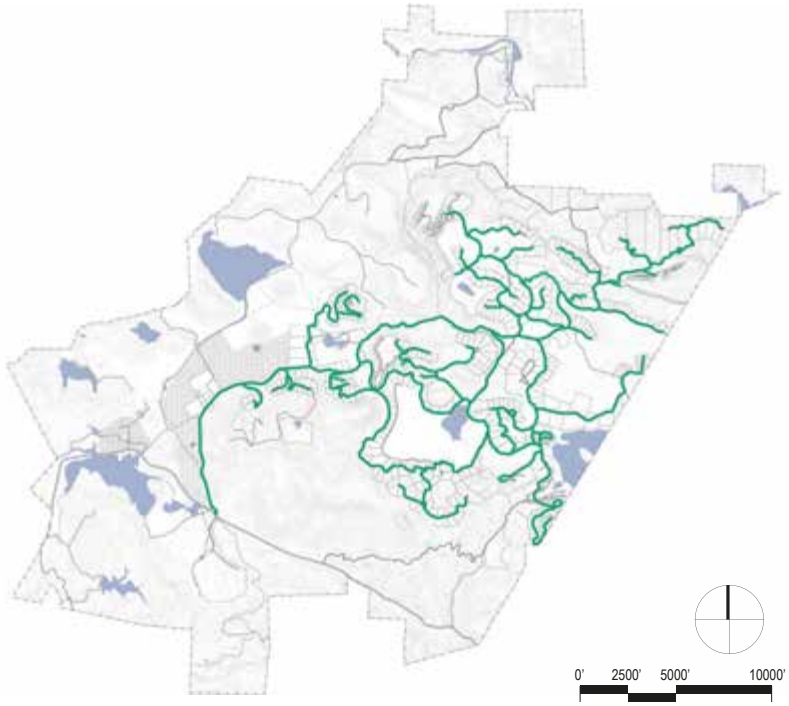
UTILITY WILDFIRE PREVENTION
ELECTRIC NETWORK



EXISTING OVERHEAD NETWORK
The existing power distribution network primarily relies upon overhead electrical lines, which can pose fire risk in the event of downed or sparking lines.

▲ **EXISTING SERVICE CONNECTION**

EXISTING OVERHEAD SERVICE LINES



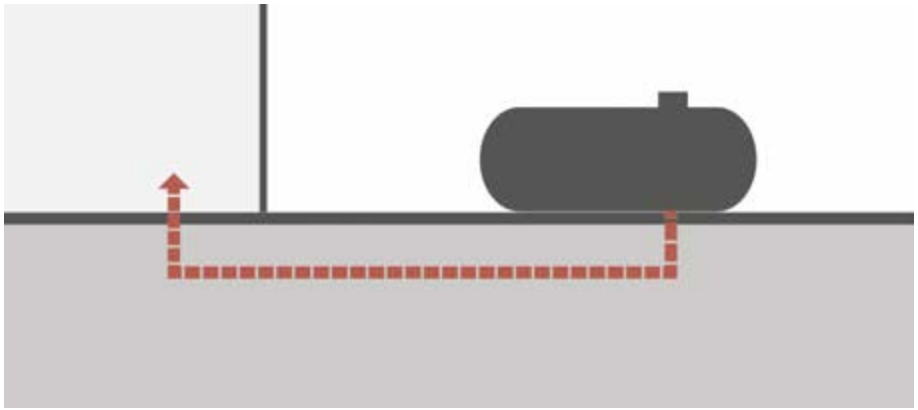
PROPOSED UNDERGROUND NETWORK
To the maximum extent feasible, the proposed electric network will be undergrounded in a joint trench system. This will ensure a safer distribution of power and reduce or eliminate the risk of overhead powerlines causing wildfires during windy conditions.

UNDERGROUND POWER AND DATA LINES

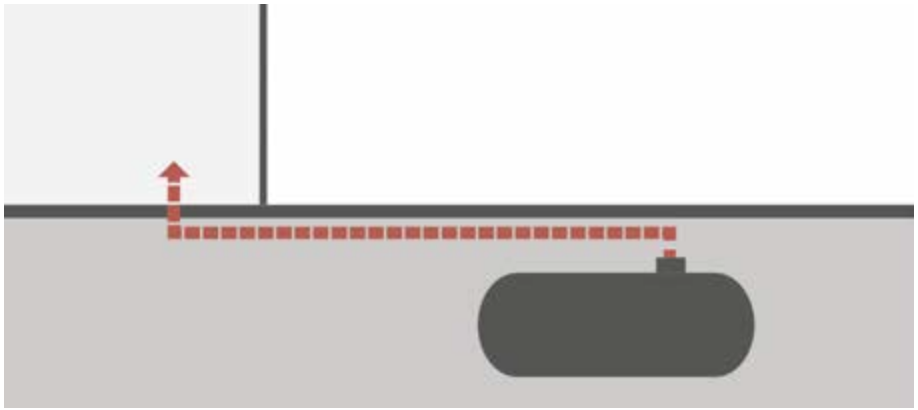
UTILITY WILDFIRE PREVENTION
PROPANE GAS SYSTEM

Similar to the strategy of undergrounding power lines, gas propane tanks will be undergrounded throughout the resort. This approach reduces the risk of gas related wildfires while also controlling for temperature fluctuations.

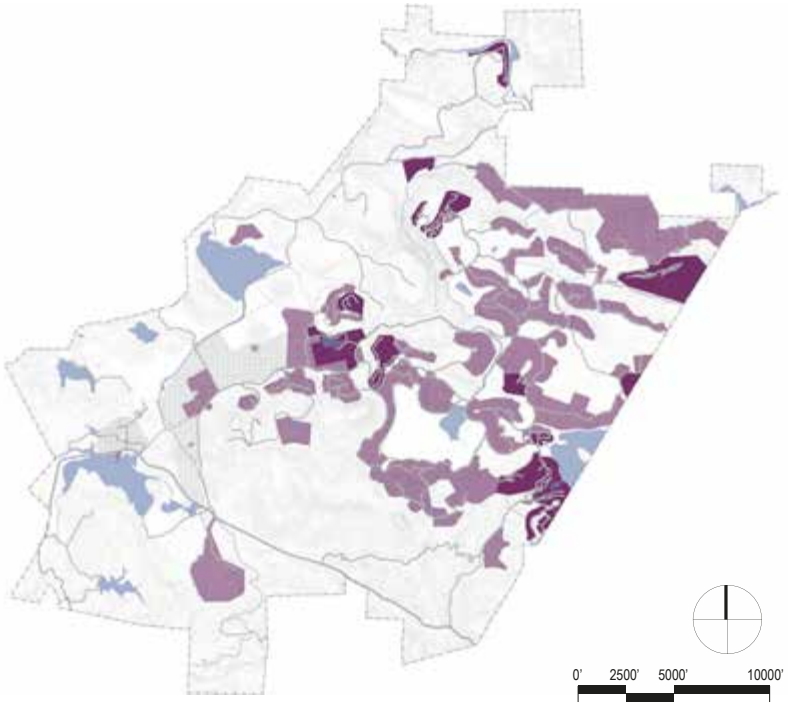
Each residential estate will be serviced by an individual underground gas tanks. Resort communities—which includes both resort and resort residential structures—will utilize a shared propane gas tank system with a localized underground distribution system.



TYPICAL ABOVE GROUND PROPANE TANKS
Above ground tanks are the standard and more affordable option, but present a greater risk of gas leaks and the potential to fuel wildfires.



PROPOSED UNDERGROUND PROPANE TANK
Propane tanks will be undergrounded to improve wildfire safety and benefit from the stabilized temperature control.



PROPOSED PROPANE GAS NETWORK
To the maximum extent feasible, propane gas tanks will be undergrounded throughout the resort, with residential estates serviced by individual tanks and resort communities serviced by shared tanks and distribution systems.

RESIDENTIAL ESTATES AND SUPPORTING FACILITIES SERVICED BY INDIVIDUAL UNDERGROUND TANKS

RESORT COMMUNITIES SERVICED BY SHARED UNDERGROUND TANKS

LANDSCAPE WILDFIRE PREVENTION

SITE BUILDING & DETERMINE TOTAL DEFENSIBLE SPACE

If a wildfire occurs, it poses a considerable risk to residential homes, commercial structures, facility structures, and their occupants. Homeowners and commercial /facility managers will be advised to implement various wildfire prevention strategies.

Site Structures to Reduce Fire Risk

The first step in addressing wildfire risk is to properly site structures. While the ideal structure location will be based on many factors (including views, accessibility, and privacy), homeowners and commercial/facility managers will be encouraged to closely consider certain criteria which reduce fire risk.

This includes siting buildings on the most level portion of the property. Wherever possible, structures should avoid being placed on mid-slopes, ridge edges, or directly between high points.

Determine Total Defensible Space

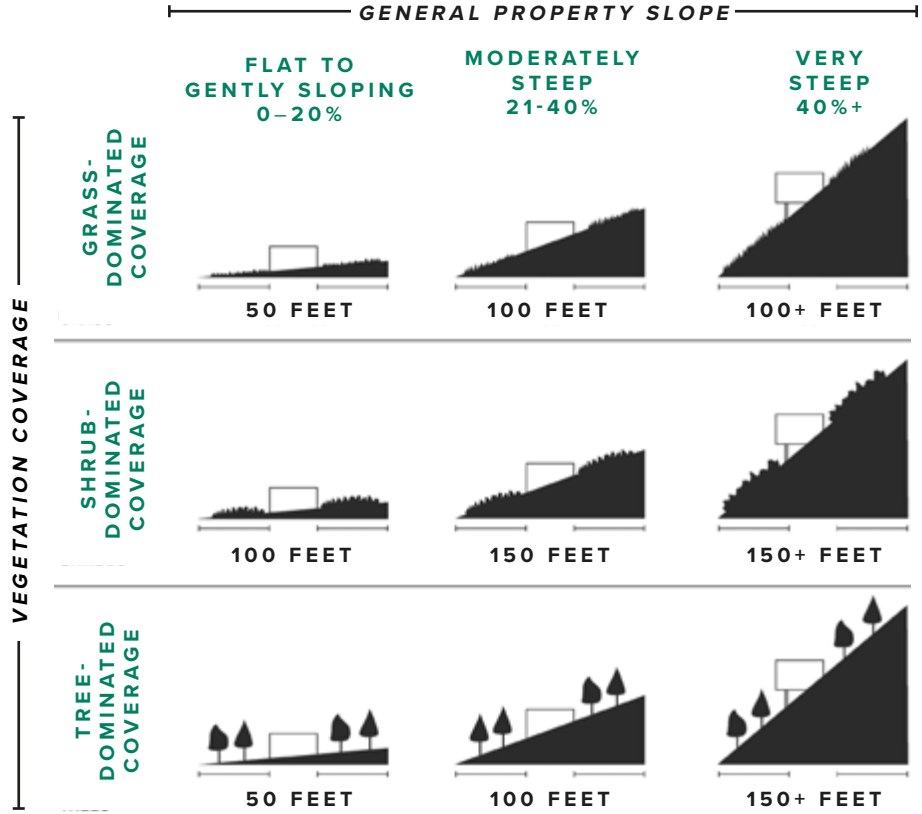
Homeowners and commercial/facility managers will be advised to establish and maintain defensible space for the purposes of reducing fire risk in the immediate vicinity of structures. The total defensible space will depend on the unique vegetated coverage and topographic conditions of each property (see right):

- **Grass-Dominated Coverage**
  Depending on slopes, 50 to 100 feet of total defensible space from the building edge in landscapes dominated by grasses, weeds, and widely scattered shrubs

- **Shrub-Dominated Coverage**
  Depending on slopes, 100 to 150+ feet of total defensible space from the building edge in landscapes dominated by shrubs, scrub, or chaparral

- **Tree-Dominated Coverage**
  Depending on slopes, 50 to 150+ feet of total defensible space from the building edge in landscapes dominated by trees; if understory is substantially shrubs, homeowners should follow “shrub-dominated coverage” category

Wherever necessary or possible, adjacent homeowners, commercial/facility managers, and the resort ownership will cooperatively address defensible space concerns which cannot be fully established or maintained within parcel line.



DETERMINING TOTAL DEFENSIBLE SPACE

The total defensible space will vary based on the unique vegetated coverage and topographic conditions of each property. In the above diagrams, the indicated length relates to the total defensible space measured from the building edge.

LANDSCAPE WILDFIRE PREVENTION
DETERMINE DEFENSIBLE ZONES

Once the building has been sited and the total defensible space has been determined, homeowners and commercial/facility managers will be advised to establish and maintain two zones of defense. These zones and associated fuel reduction strategies will reduce the risk of fire in the immediate vicinity of structures:

- **Zone 1: Remove Flammable Vegetation**

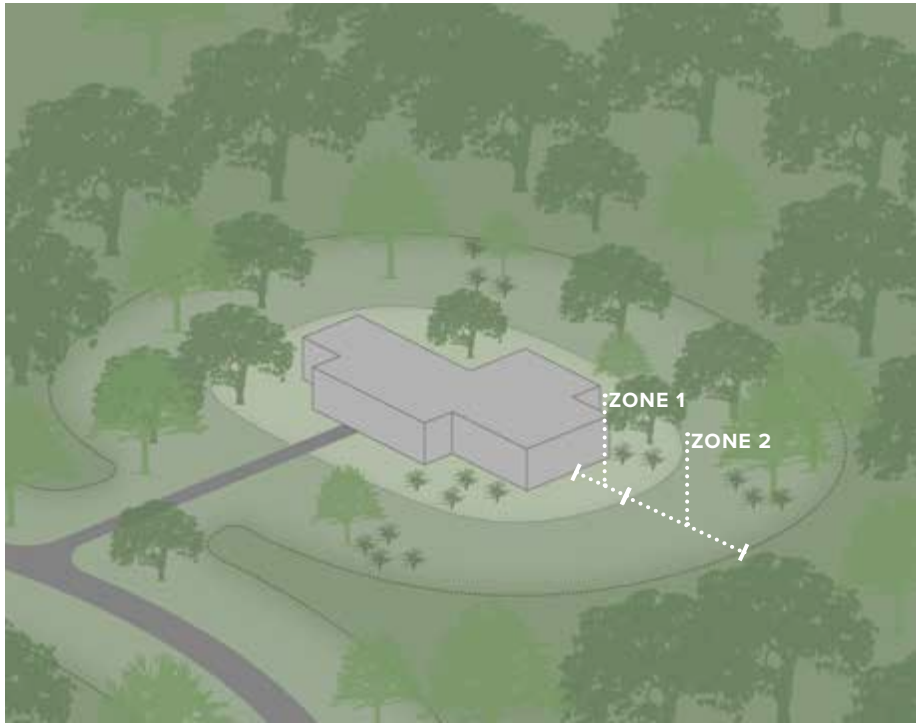
  Regardless of the total defensible space, it is recommended that the first defense zone should be maintained zero to 30 feet from the edge of structures.

  Within this zone, flammable vegetation should be removed. This includes removing all standing dead trees and shrubs. All downed dead trees, tree branches, and shrubs should also be removed if not yet decayed. Trees should generally be pruned up to a height of 10 feet, depending on tree species and understory conditions. Flammable shrub species should be thoroughly pruned.

- **Zone 2: Reduce Flammable Vegetation**

  The second defense zone should be maintained from 30 feet from the building edge to the edge of the total defensible space (e.g. 50 feet, 100 feet, 150 feet–see previous page); this includes a defensible space of zero to 15 feet from the driveway edge.

  Within this zone, flammable vegetation should be reduced. Trees and shrubs should be selectively addressed to reduce flammable vegetation parts, including pruning dead or lower branches. Dead vegetation should also be selectively removed within this wider zone.



STANDARD DEFENSIBLE ZONES
Two defensible zones should be established and maintained within the total defensible space.

ZONE 1 REMOVE FLAMMABLE VEGETATION

ZONE 2 REDUCE FLAMMABLE VEGETATION

LANDSCAPE WILDFIRE PREVENTION
PREPARE THE PROPERTY

After the defensible space and zones have been determined, residential, commerical, and facility properties should be assessed for key fire risks. Primarily, continuous and dense vegetation creates a condition in which fires can quickly spread. Trees and shrubs should be vertically and horizontally separated in order to reduce “ladder fuel” conditions–or situations in which flames can easily move upwards from the vegetation understory to the canopy.

The following offers general vegetation clearance and spacing recommendations in order prepare sites for structures. Although these standards should be followed across the entire defensible space, greater adherence to these standards should be followed within Zone 1.

Tree and Shrub Vertical Clearance
In general, the lowest level of the canopy branches should be three times greater than the height of the vegetation understory. This vertical separation relationship can be established through either pruning the vegetation understory or the overhead tree limbs. For example, if a shrub is three feet in height, the lowest level of the directly overhead canopy branches would be trimmed or pruned to a height of 12 feet.

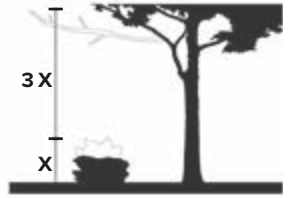
Tree and Shrub Horizontal Spacing
Individual or small clusters of trees and shrubs should generally be separated based on the horizontal spacing standards (see right) in order to reduce potential fire movement. For example, if a property is “moderately steep,” shrubs that are three feet in height should be separated by 12 feet. Note that the recommended tree and shrub horizontal separation distances are measured from the canopy edge, not the trunk.

LADDER FUELS

Flames burning at lower levels can ignite taller plants by moving up vegetated “ladder fuels”.

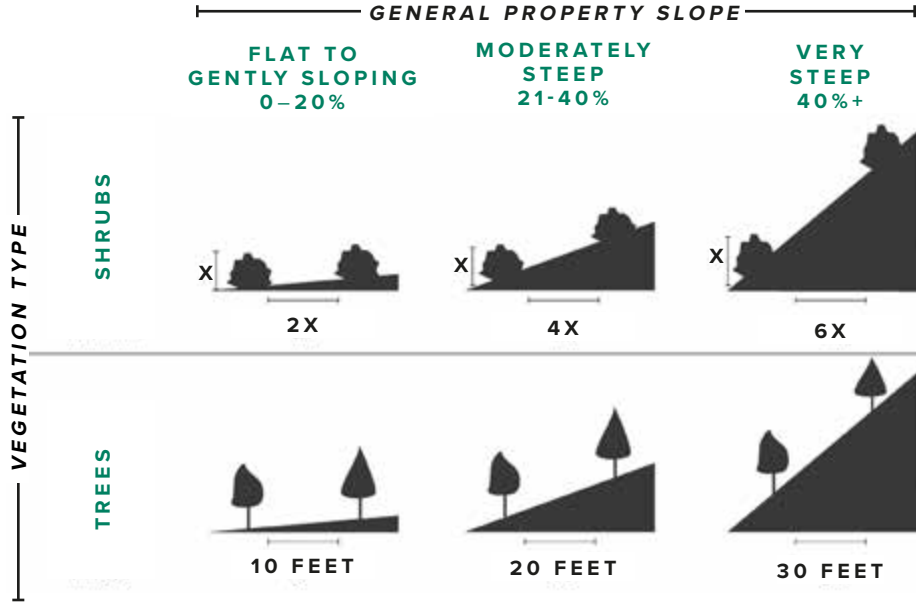
The potential for ladder fuels can be avoided by separating vegetation vertically and horizontally.

VERTICAL CLEARANCE



The lowest level of the canopy branches should be three times greater than the height of the vegetation understory.

HORIZONTAL SPACING



Individual or small clusters of trees and shrubs should be separated in order to reduce potential fire movement

LANDSCAPE FIRE PREVENTION
ESTABLISH NEW LANDSCAPE

After the residential, commercial, or facility property has been cleared of flammable vegetation and ladder fuels have been addressed, various strategies can reduce wildfire risk where establishing a new landscape design.

Fire-Resistant Planting Design and Selection
New planting design should follow the spacing and clearance strategies delineated above. Planting designs and patterns should anticipate the mature size of new trees and shrubs. Simple, low-volume, and well-separated planting designs will generally achieve these spacing and clearance objectives. All efforts should be made to avoid tree limbs touching structures or powerlines; tree limbs should also not be within 10 feet of the chimney.

Planting selection should avoid fire-prone species and instead prioritize fire-resistant species. In general, fire-resistant species are low-growing with a high moisture content and have stems or leaves that are not resinous, oily, or waxy.

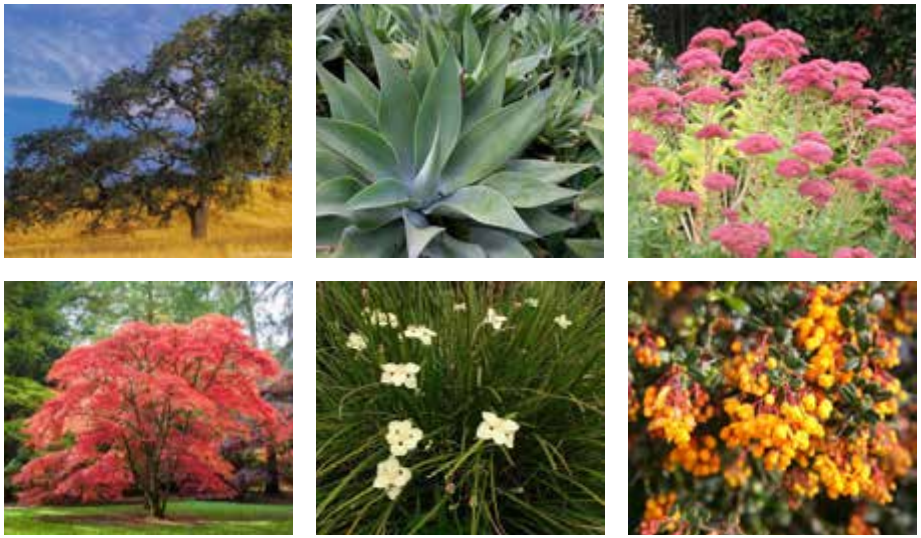
Small-Scale Fire Breaks: Hardscapes and Irrigation
Wherever possible, landscape design should be configured to create a series of smaller-scale fire breaks in the immediate vicinity of structures.

For example, driveways, walkways, patios, and parking areas could be selectively spread out to impede a potential fire path; non-combustible materials (such as mulch, boulders, and rocks) will additionally reduce fire risk. Pools, water features, ponds, or streams could also be creatively used as small-scale fire breaks. Irrigation systems used to establish or maintain landscapes could also create an irrigated fire break.

Additional Strategies
Additional landscape design strategies should be prioritized to reduce fire risk and improve emergency response. This includes the following:

- Constructing fencing with non-combustible materials, such as stone or metal, rather than wood;
- Enclosing areas below decks to reduce the risk of debris ignition;
- Clearly marking the address number on the house itself and at the driveway entry to aid in identification in the case of a fire emergency; and
- As much as possible, designing driveways and bridges to allow for large-scale emergency vehicle access.

FIRE PRONE PLANTING TO AVOID
Certain plants should be avoided because of their fire prone characteristics, such as resinous, oily, or waxy leaves. This includes trees such as the Eucalyptus.



FIRE RESISTANT PLANTING TO USE
Fire resistant plants should be used as much as possible. This includes plants that are low-growing and have a high moisture content.

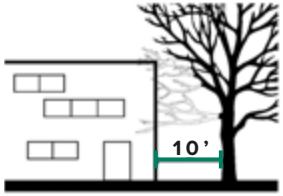
LANDSCAPE FIRE PREVENTION
MANAGE LANDSCAPE TO REDUCE RISK

Various landscape management practices can address wildfire hazards within residential, commercial, and facility landscapes over time.

This includes the following recommendations for homeowners or commercial/ facility managers:

- Periodically inspect the property to maintain defensible space—which includes ongoing removal and reduction of flammable vegetation and reestablishment of vegetation clearance and spacing standards;
- Prune tree limbs which are within 10 feet of buildings or chimneys or are otherwise encroaching on powerlines;
- Within the defensible space, trim tree limbs below 10 feet in height; for smaller trees, prune the lower 1/3 of the branches;
- Routinely mow grasses and wildflowers within the defensible space to a maximum height of 4 inches, particularly during dry seasons;
- Keep vegetation well-irrigated, particularly within the first defense zone;
- Where feasible, irrigation systems used for plant establishment should be maintained for additional wildfire protection;
- Install fine mesh metal on eaves, roofs, and vents to prevent embers from entering the structure;
- Remove vegetation debris that accumulates on the roof or within the rain gutters;
- Place combustible debris (such as firewood, wood scraps, grass clippings, leaf piles, or garbage cans) and propane tanks outside of the first defense zone; and
- Keep any ignitable outdoor furniture and equipment (i.e. wooden brooms and shovels) 10 feet away from structures.

PRUNE, TRIM, AND MOW



PRUNE: Prune tree limbs which are within 10 feet of building or chimneys or are otherwise encroaching on powerlines.

TRIM: Within the defensible space, trim tree limbs below 10 feet in height; for smaller trees, prune the lower 1/3 of the branches

MOW: Mow and grass to a maximum of 4 inches in height.

LEAN, CLEAN, AND GREEN

LEAN: Minimize or eliminate the use of flammable vegetation and emphasize the use of low-growing herbaceous (non-woody) plants. Ornamental trees and shrubs should be kept green.

CLEAN: Remove all dead trees and shrubs within the defensible area. Remove all dead leaves, twigs, cones and branches. Reduce thick layers of pine needles to a depth of 2 inches.

GREEN: Keep plants green and healthy by irrigating throughout the fire season.

BUILDING WILDFIRE PREVENTION

EXTERIOR BUILDING STRATEGIES

The fire safety of a building starts with design and material decisions. All buildings will abide by relevant California Building Codes “CBC” and Wildland Urban Interface “WUI” standards. The following are a selection of strategies to prevent fires on the building exterior:

1 | Class A rated roof with non-combustible covering
The roof is the most vulnerable part of the home in the event of a wildfire. Class A rated roofs are highly resistant to fire by minimizing the ability of flames to spread.

2 | Fire resistant eaves, overhangs, and soffits
The risk of embers getting caught in the eaves and igniting can be minimized by eliminating or shortening overhangs, or otherwise constructing eaves, overhangs, and soffits with non-combustible materials.

3 | Building vents precautions
Vents in roofs, soffits, and exterior walls should be made of non-combustible materials with screens to prevent the penetration of embers.

4 | Underground utility connections
Wherever possible, utility connections should be undergrounded, particularly for electrical and fuel-related utilities.

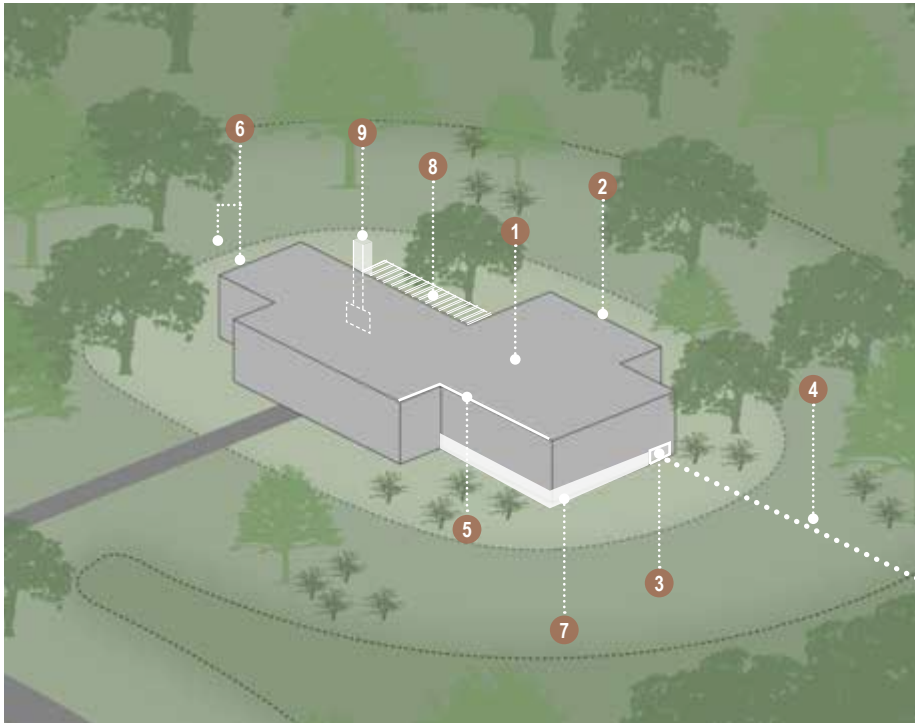
5 | Non-combustible leaf guards over gutters
Leaf guards can reduce the build-up of combustible leaf debris. Guards, gutters, and downspouts should be made of noncombustible material.

6 | Exterior fire suppression systems
Exterior fire suppression systems will be required for all primary structures. These systems are remote or heat-activated. During a fire, they will prevent substantial damage to primary buildings as well as nearby outdoor features.

7 | Fire resistant material for exposed foundations
Fire resistant materials should be used for all exposed foundations above grade, including both open and closed foundations.

8 | Fire resistant deck materials
Decks connected to structures should be fire resistant, which can be achieved by using fire retardant treated timber, fire resistant plastic, and non-combustible materials for all deck components, including skirting to protect the deck underside.

9 | Exterior fire places and wood stoves
Anything with an exposed flame, such as a outside fireplace or wood stove, should have a screen built into the design to protect against stray embers.



RECOMMENDED EXTERIOR DESIGN STRATEGIES

The highlighted items are a selection of strategies to incorporate into buildings to address wildfire safety.

1. CLASS A RATED ROOFS WITH NON-COMBUSTIBLE COVERING
2. FIRE RESISTANT EAVES, OVERHANGS, AND SOFFITS
3. BUILDING VENT PRECAUTIONS
4. UNDERGROUND UTILITY CONNECTIONS
5. NON-COMBUSTIBLE LEAF GUARDS OVER GUTTERS
6. EXTERIOR FIRE SUPPRESSION SYSTEMS
7. FIRE RESISTANT MATERIAL FOR EXPOSED FOUNDATIONS
8. FIRE RESISTANT DECK MATERIALS
9. EXTERIOR FIRE PLACES AND WOOD STOVES

SOURCE: FEMA, Home Builder’s Guide to Construction in Wildfire Zones, 2008

BUILDING WILDFIRE PREVENTION
INTERIOR BUILDING STRATEGIES

On the interior, certain precautions and practices can further protect residential, commercial, and facility structures. The following are a selection of interior building strategies to reduce wildfire risk:

1 | Smoke detectors throughout the home
Smoke detectors should be located throughout structures to cover all livable areas. If placed in hallways between living and sleeping areas, smoke detectors can reach many rooms. In addition, smoke detectors shall be programmed to communicate directly to a fire and security monitoring companies.

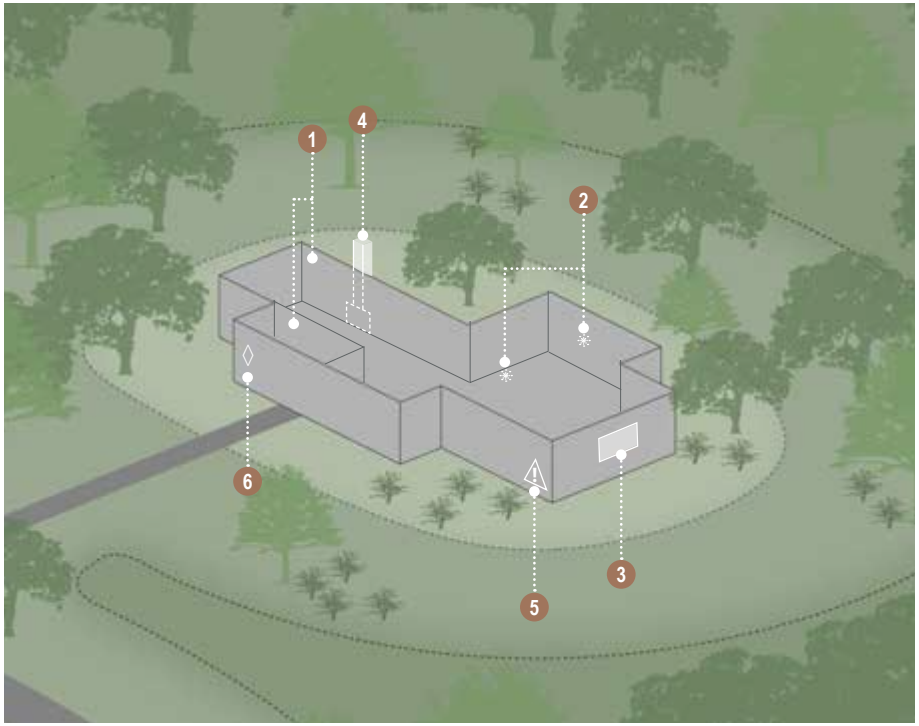
2 | Interior fire sprinklers
Interior fire sprinklers will be required pursuant to the current California building code. They come in a variety of styles in order to blend with interior aesthetics. They are automatically activated by high heat and can include a warning system.

3 | Window security quick-release
If window security bars or other protection systems are installed, a quick-release system should be included to allow for immediate escape in the case of a wildfire emergency.

4 | Chimney maintenance
Chimneys should be inspected yearly to remove all flammable debris and material.

5 | Combustible hazardous material protection
All combustible materials should be stored in protected safety containers away from appliances with ignition sources, such as stoves and water heaters.

6 | Wildfire fighting tools
Homeowners and commercial/facility managers should have easy access to wildfire emergency tools, such as a shovel, hoe, rake, and bucket.



RECOMMENDED INTERIOR DESIGN ELEMENTS

The fire safety of a structure starts with design decisions. The highlighted items are a selection of some strategies to incorporate into building interiors.

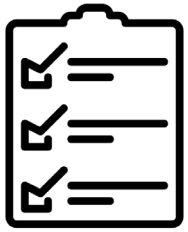
1. SMOKE DETECTORS THROUGHOUT THE STRUCTURE
2. INTERIOR FIRE SPRINKLERS
3. WINDOW SECURITY QUICK-RELEASE
4. CHIMNEY MAINTENANCE
5. COMBUSTIBLE MATERIAL PROTECTION
6. WILDFIRE FIGHTING TOOLS

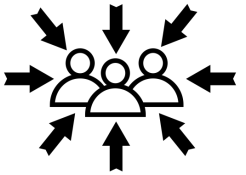
SOURCES: FEMA, Home Builder's Guide to Construction in Wildfire Zones, 2008; CalFire, Homeowners Checklist, 2009

WILDFIRE PREVENTION PREPAREDNESS

RESIDENT RECOMMENDATIONS

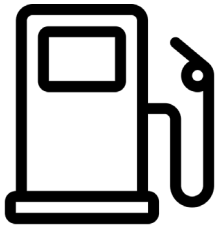
Homeowners will be advised to plan for the event of a wildfire. This will require preparing in advance and developing specific action plans for different scenarios.





Pre-Fire Preparations

- Develop an emergency plan with your family;
- Place important documents in a fire-proof box close to the exit;
- Practice how to shut off key utilities, including water, gas, and electricity;
- Discuss plans for evacuation, including what to bring and where to go;
- Determine multiple evacuation routes in case one is blocked;
- Develop a communication plan in case your family is separated;
- Select meeting places a safe distance the home; and
- Identify a non-local contact person who knows your emergency plan.

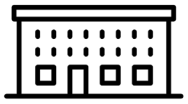


Potential Fire Threat (including Red Flag Warnings)

- Pay attention to local news for updates and evacuation notices;
- Keep flashlights and portable chargers ready in case of power shutoff;
- Ensure that your car has gas, as stations often become crowded;
- Confirm that all garden hoses are attached and accessible;
- Prop a ladder against the house for the potential need for roof access;
- Disable electronic garage openers so this area can be manually opened;
- Prepare and pack essential items to prepare for potential evacuation; and
- Gather pets in kennel of on leashes to keep them close and safe

Notice to Evacuate

- Stay together as a household and remember that time is of the essence;
- Dress appropriately with long pants/sleeves, layers, and face protection;
- Shut off the home's gas supply, but leave lights and water on;
- Close all doors and windows but leave exterior doors unlocked;
- Pack water, supplies, and other essentials in the car;
- Ensure all car windows are closed while evacuating;
- Choose evacuation routes selected by emergency personnel; and
- Follow all directions and signage provided by emergency personnel.



Shelter in Place

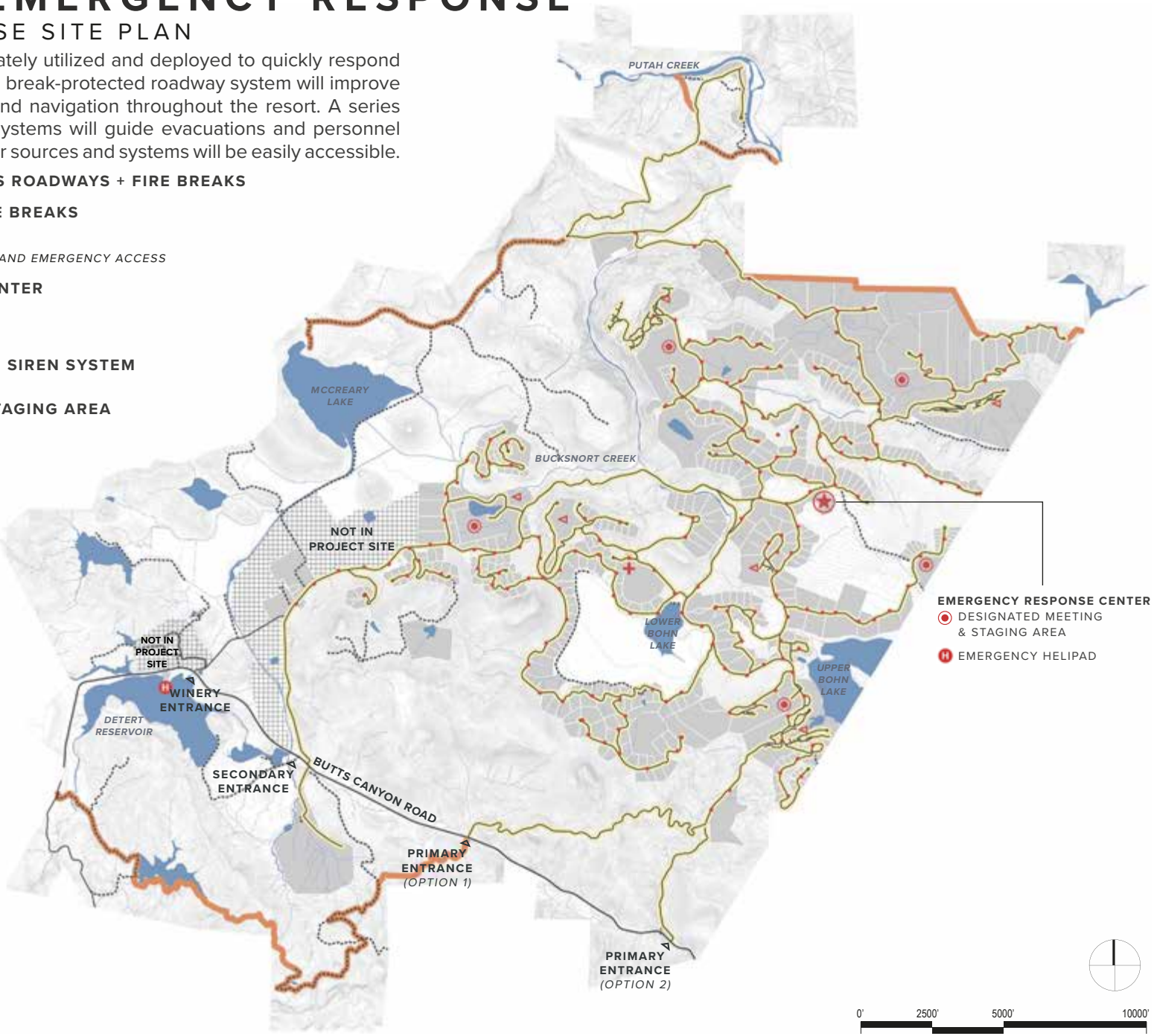
- Take shelter within a building whenever possible;
- Close all windows and doors, but leave unlocked;
- Remain close to the front door and low to the ground;
- Continue to monitor the fire and stay observant;
- If not at home, proceed to a designated meeting & staging area;
- If unable to reach either home or a designated meeting & stage area, park and take shelter in your car;
- If in the car, stay on paved roads and park away from vegetation; and
- Leave headlights and emergency flashers on while you wait for aid.

WILDFIRE EMERGENCY RESPONSE

WILDFIRE RESPONSE SITE PLAN

Various systems will be immediately utilized and deployed to quickly respond to a wildfire emergency. The fire break-protected roadway system will improve emergency personnel access and navigation throughout the resort. A series of emergency communication systems will guide evacuations and personnel response. Fire suppression water sources and systems will be easily accessible.

- **PRIMARY TWO-WAY ACCESS ROADWAYS + FIRE BREAKS**
- **PROPERTY BOUNDARY FIRE BREAKS**
- **EXISTING RANCH ROADS**
  USED FOR ACTIVE FUEL REDUCTION AND EMERGENCY ACCESS
- **EMERGENCY RESPONSE CENTER**
- **EARLY DETECTION SYSTEM**
  HIGH-DEFINITION CAMERA
- **EMERGENCY NOTIFICATION SIREN SYSTEM**
  EXACT LOCATIONS TBD
- **DESIGNATED MEETING & STAGING AREA**
- **HELIPAD**
- **FIRE HYDRANTS**
- **WATER SOURCES**
  RESERVOIRS, LAKES, PONDS, CREEKS & STREAMS



WILDFIRE EMERGENCY RESPONSE

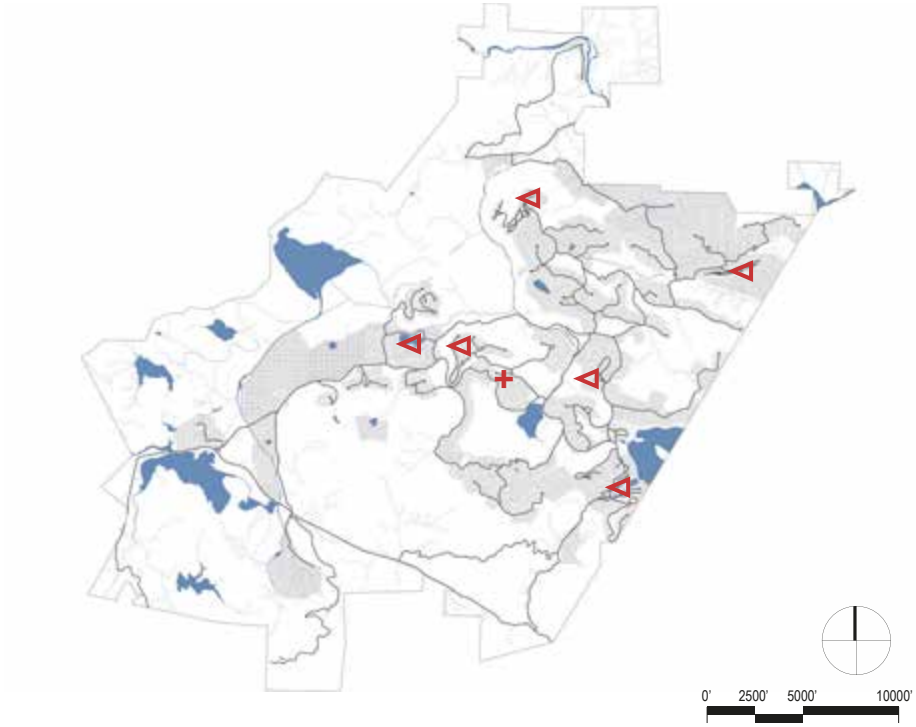
WILDFIRE EMERGENCY DETECTION & COMMUNICATION SYSTEMS

Efficient emergency communication is critical for providing immediate information to residents, visitors, and employees. In the event of a wildfire emergency, the following detection and communication systems will quickly be deployed:

Early Detection System
An early detection system will immediately identify potential fires igniting on site or in the vicinity. This system includes a high-definition camera installed in the center of the resort.

Emergency Notification Siren System
Located throughout the resort, the siren system will alert people to a wildfire emergency and announce updated information and directions.

Opt-out Communication System
All residents, visitors, and employees will be enrolled in an opt-out phone-based communication system, such as Nixle, to receive emergency notifications. This system will supplement the site-wide emergency siren system to ensure that everyone is alerted of important emergency information and updates.



COMMUNICATION RESPONSE SYSTEM

Key communication technologies will aid in detecting and communicating wildfire emergencies.

+ **EARLY DETECTION SYSTEM**
HIGH-DEFINITION CAMERA

◁ **EMERGENCY NOTIFICATION SIREN SYSTEM**
EXACT LOCATIONS TBD

WILDFIRE EMERGENCY RESPONSE

WILDFIRE EMERGENCY RESPONSE CENTER & REFUGE AREAS

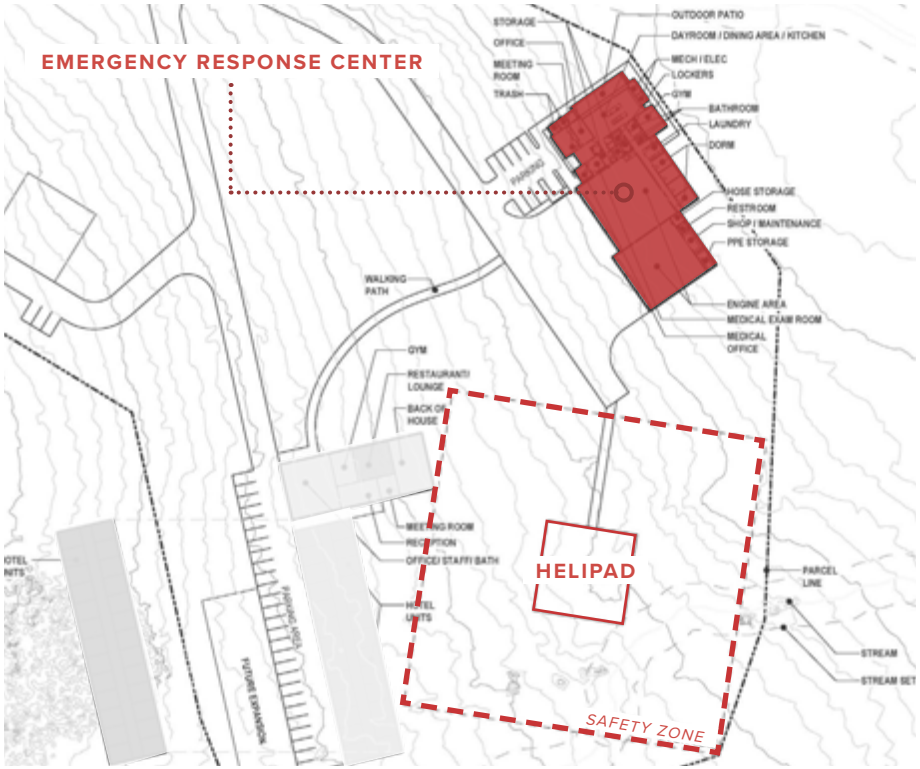
Various areas of the site will play a pivotal role in servicing evacuees and emergency personnel in the case of wildfire emergency.

Emergency Response Center

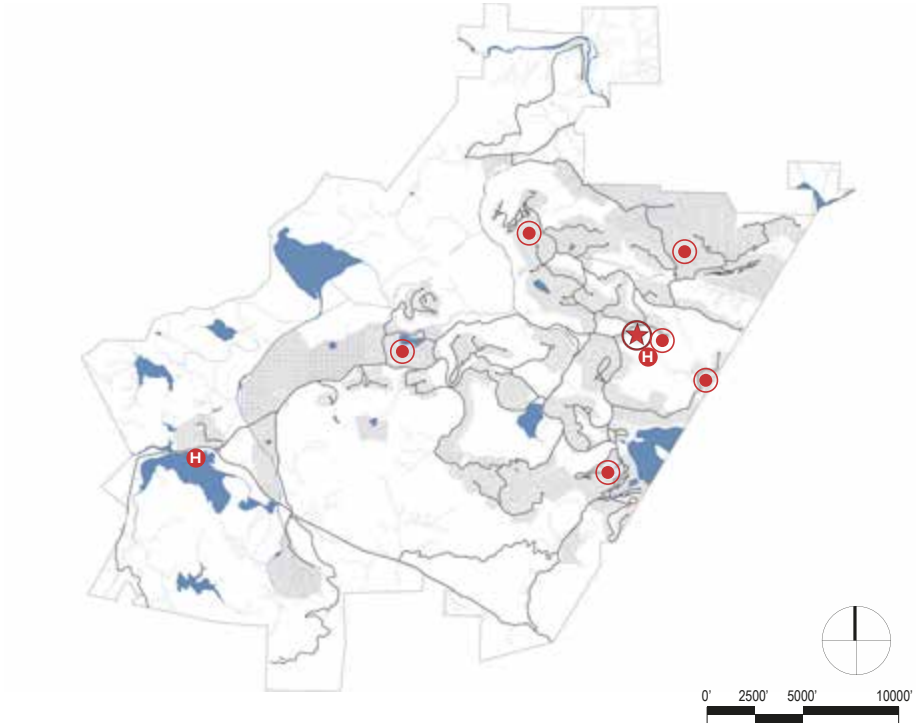
The on-site Emergency Response Center will serve as a primary location for first responders to gather and coordinate efforts. The center will include essential fire-fighting equipment and minor medical supplies. In the case of a major wildfire, the center can act as a headquarters for operations. A helipad will be located on-site for emergency landings and take-offs; and additional helipad at Detert Reservoir can also be used during emergencies

Designated Meeting & Staging Areas

Depending on the circumstances of a wildfire emergency, it may be difficult to evacuate. In this situation, residents, visitors, and employees will be directed to gather at designated meeting & staging areas where they will be provided information and assistance.



EMERGENCY RESPONSE CENTER SITE PLAN



EMERGENCY RESPONSE CENTER & MEETING POINTS

The emergency response center is located in a centralized area to service the entire site; temporary meeting points are dispersed throughout the site in order to provide easily accessible locations for all residents, visitors, and employees.

- **EMERGENCY RESPONSE CENTER**
- **HELIPADS**
- **DESIGNATED MEETING & STAGING AREAS**

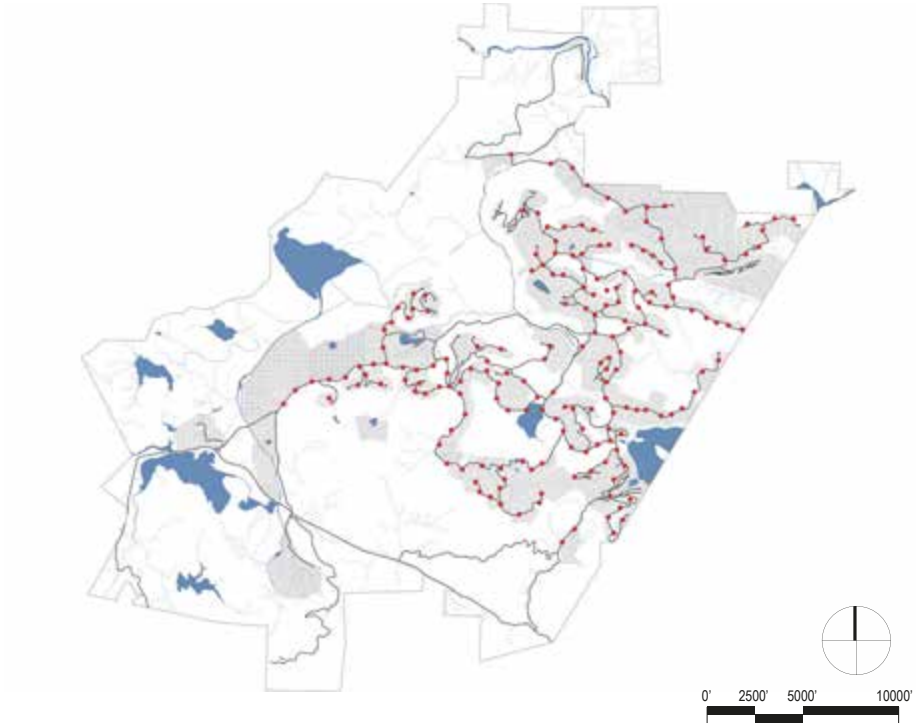
WILDFIRE EMERGENCY RESPONSE
WILDFIRE WATER SUPPLY & SUPPRESSION SYSTEM

If wildfires occur, a comprehensive, on-site water supply and fire suppression system will service firefighting needs.

Fire Suppression Water Sources
Fire suppression systems will be serviced by reclaimed and non-potable water sources, such as recycled wastewater, non-treated groundwater, and surface water reservoirs. Surface water sources—including reservoirs, lakes, ponds, creeks, and streams—can also be drawn upon by fire engines or helicopter buckets in the case of a wildfire emergency.

Fire Suppression Water System
A connected non-potable water distribution system will supply all water to fire hydrants as well as interior and exterior fire suppression systems. Portions of the system will be designed as a loop to maximize flow. Booster pump systems will also maintain water pressure above minimum requirements. Additional water storage may also be established in areas further from water sources for wildfire emergencies.

Fire Hydrants
All hydrants will have the capacity to maintain a minimum of a two-hour flow. Hydrants will be located within close proximity to roadways and spaced to maintain required flow to all parts of the site.



WILDFIRE WATER SUPPLY & SUPPRESSION SYSTEM
A network of fire hydrants and surface water sources will service the entire site.

- **FIRE HYDRANTS**
- **WATER SOURCES**
  RESERVOIRS, LAKES, PONDS, CREEKS & STREAMS

PRIMARY CONTRIBUTORS

California Department of Forestry & Fire Protection (CAL FIRE)
Mike Wink, Battalion Chief

Lotusland Investment Holdings, Inc.
Ownership Representative & Applicant
Randy Sternberg, Vice President
Tiffani Moore, Administrative Manager

Palisades Land Use
Entitlement & Land Use Planning
Kirsty Shelton, Principal Planner
Rachel Lenihan, Associate Planner

SWA Group
Landscape Architecture, Planning & Urban Design
Joe Runco, Managing Principal
Alison Ecker, Designer/Planner
Mariana Ricker, Associate
Ying Tan, Designer

SOURCES

1 meter Digital Elevation Model (DEM), U.S. Geological Survey, 2018

Calscape, California Native Plant Society, 2019

California Department of Forestry & Fire Protection, “Red Flag Warning & Fire Weather Watches,” 2019

California Fire Return Interval Departure (FRID), USDA Forest Service, Pacific Southwest Region, 2012 with 2016 update

FIRESafe MARIN, 2019

Guenoc Ranch Safety Alert, California Department of Forestry and Fire Protection (CAL FIRE), July 2019

Home Builder’s Guide to Construction in Wildfire Zones, Federal Emergency Management Agency, 2008

Homeowners Checklist: How to Make Your Home Fire Safe, California Department of Forestry and Fire Protection (CAL FIRE), 2009

Konocti Wind Patterns, South Lake County Fire Protection District and National Weather Service San Francisco Bay Area, 2019

Lake County Fire Hazard Severity Map, California Department of Forestry and Fire Protection (CAL FIRE), 2007

Living with Fire in Napa County: A Guide for the Homeowner, Napa Communities Firewise Foundation, 2005

Local Wind Patterns, Lake County Weather, Western Weather Service, 2019
Note: The wind direction diagrams represent general wind patterns during annual fire season (08/01- 11/30). For detailed information on wind speed and directions, please refer to the data source.

National Burn Severity Mapping Project, National Park Service - U.S. Geologic Survey, 2014 and 2015

National Oceanic and Atmospheric Administration: National Weather Service, “Understanding Wildfire Warnings, Watches and Behavior,” 2019

National Landscape Conservation System, Bureau of Land Management, 2019

San Francisco Chronicle, “Are infamous Diablo winds responsible for recent wildfires?,” 2019

Standard Operating Procedure: Fire Prevention and Protection, Granite Construction, 2015

TIGER/Line Shapefiles, U.S. Census Bureau, 2018

U.S. Forest Service, Classification and Assessment with LANDSAT of Visible Ecological Groupings (CALVEG), EVeg Mid Region 5 North Coast Mid, January 18, 2018;
Note: Data source information ranges from the year 1998 to 2015; data for site from 1998; data source crosswalked with the California Wildlife Habitat Relationship (CWHR); CWHR categories simplified seven categories for illustrative purposes of the exhibit.

REVISED APPENDIX OAK

OAK MITIGATION PLAN

OAK MITIGATION PLAN

GUENOC VALLEY SITE

JUNE 2020

Guenoc Valley Ranch
22000 Butts Canyon Road
Middletown, CA 95461

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
www.analyticalcorp.com

OAK MITIGATION PLAN

GUENOC VALLEY SITE

JUNE 2020

Guenoc Valley Ranch
22000 Butts Canyon Road
Middletown, CA 95461

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
www.analyticalcorp.com

TABLE OF CONTENTS

GUENOC VALLEY DISTRICT OAK MITIGATION PLAN

1.0 INTRODUCTION 1

1.1 Project Location 1

1.2 Existing Use 1

1.3 Project Desription 4

2.0 IMPACTS TO OAKS 5

2.1 Impact Minimization Measures 5

2.2 Oak Impacts by Habitat Type 6

3.0 PROPOSED OAK MITIGATION PLAN 7

3.1 Mitigation Goals and Objectives 7

3.2 Oak Mitigation Recommendations by Impact Type 8

4.0 OAK MITIGATION 10

4.1 Oak Woodland Preservation 10

4.2 Oak Tree Planting 11

4.3 Oak Habitat Enhancement 13

4.4 Mitigation Area Maintenance 14

5.0 MONITORING PLAN 14

5.1 Data Collection 14

5.2 Success Criteria 15

5.3 Reporting 15

5.4 Schedule 15

5.5 Adaptive Management 16

6.0 COMPLETION OF MITIGATION 16

6.1 Assurance of Mitigation Permanance 16

7.0 REFERENCES 18

FIGURES

Figure 1 Regional Location 2

Figure 2 Site and Vicinity 3

TABLES

Table 1 Oak Habitat Types and Potential Phase 1 Impacts 6

Table 2 Summary Matrix of Recommended Oak Mitigation 9

Table 3 Potential Oak Woodland Preservation Areas 10

ATTACHMENTS

Attachment A MAHA Guenoc Valley Oak Preservation Plan

1.0 INTRODUCTION

The Guenoc Valley District (GVD) is a proposed rezoning and planned development project located in southern Lake County within an approximately 16,000-acre boundary (Guenoc Valley Site), (**Figure 1** and **Figure 2**). The first phase of planned development includes luxury resorts and a master-planned residential community to be sited in clusters (Phase 1). The GVD incorporates low impact designs that prioritize large residential parcels with low density and clustered development, preserving surrounding open space and agricultural cultivation. The plan to develop a portion of the GVD will be accompanied by this Oak Mitigation Plan.

This Oak Mitigation Plan (Plan) addresses development for both Phase 1, which is under project-level environmental review, as well development of future phases, which are under programmatic-level review in the same EIR (Proposed Project). This Plan addresses the impacts to oaks resulting from the Proposed Project as analyzed in the EIR, defines specific impacts in the Phase One development, and outlines a system of impact identification and mitigation that can be applied consistently to all phases of development. Therefore, mitigation measures applied in Phase One as they relate to oaks will also apply to future phases.

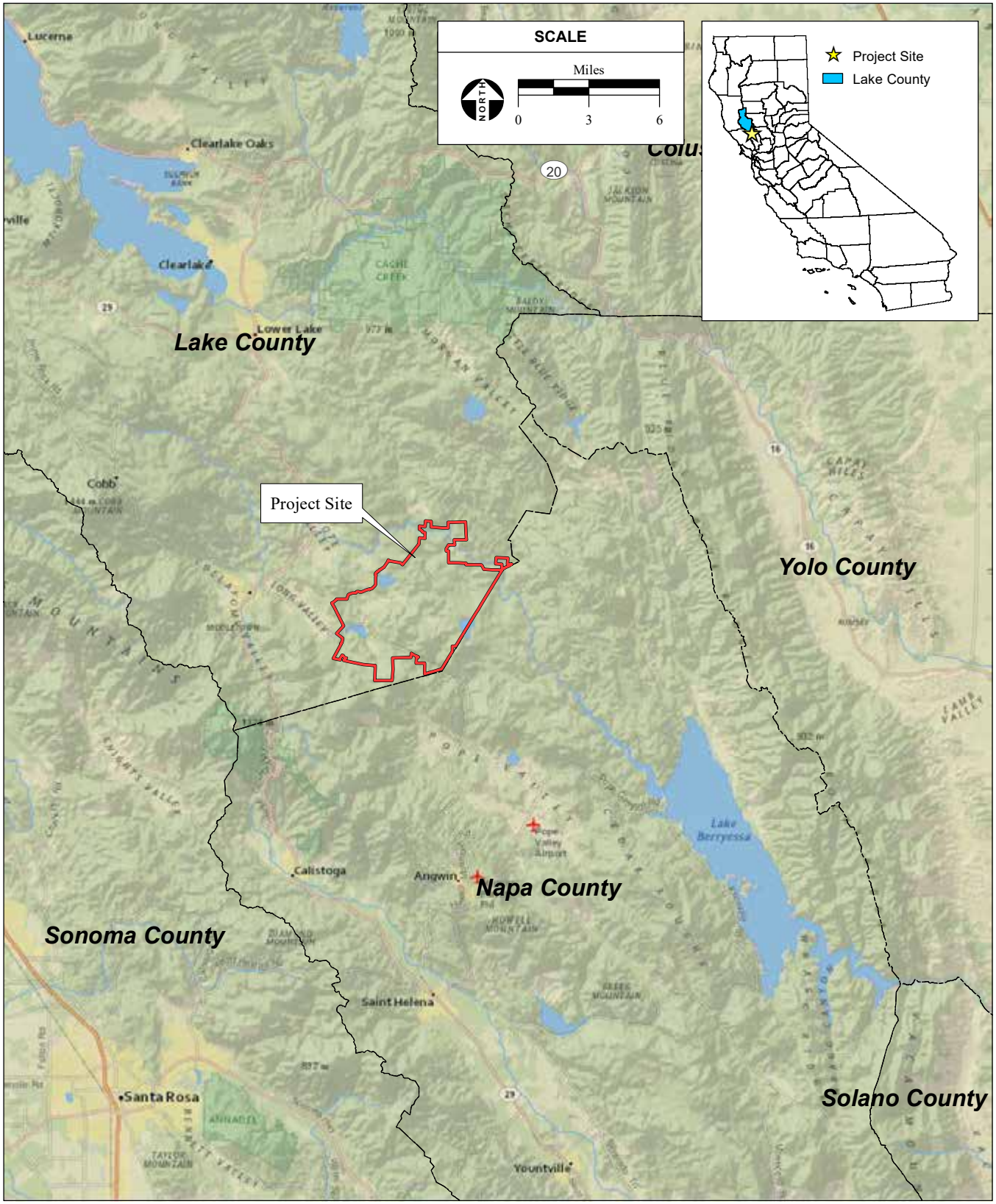
A portion of the Guenoc Valley Ranch was evaluated for environmental impacts related to planned water diversion and use of surface water for land conversion to vineyard. The appropriation and use of water and conversion of land to vineyard was approved by the State Water Board based on an EIR completed in March of 2009 (AES, 2009; FEIR). Development of these approved acreages is still in progress. An Oak Tree Replacement Plan was completed in September of 2008 to mitigate for impacts to oaks within the Places of Use (POUs), where surface water was approved for use, identified in the 2009 FEIR (AES, 2008). The previous Oak Mitigation Plan continues to apply to the development of vineyards and use of water approved under the 2009 EIR.

1.1 PROJECT LOCATION

The Guenoc Valley Site is located approximately three miles east of the town of Middletown and is accessible via Butts Canyon Road (**Figure 1** and **Figure 2**). Long Valley and Coyote Valley occur to the west of the Ranch, and the Cedars Mountains occur to the north. Terrain varies from areas of level valley to areas of steep, rocky terrain. Several vegetative communities exist within the Ranch including; agriculture, annual grassland, oak woodland, pine-oak woodland, cypress forest, mixed conifer forest, and chaparral. Aquatic habitats include ephemeral drainages, perennial streams, seasonal wetlands, groundwater seeps, freshwater marsh, and manmade ponds and reservoirs. Climate of the area consists of hot dry summers and cool, moist winters. Annual precipitation averages approximately 44.1 inches, with zero to insignificant snowfall (WRCC, 2016).

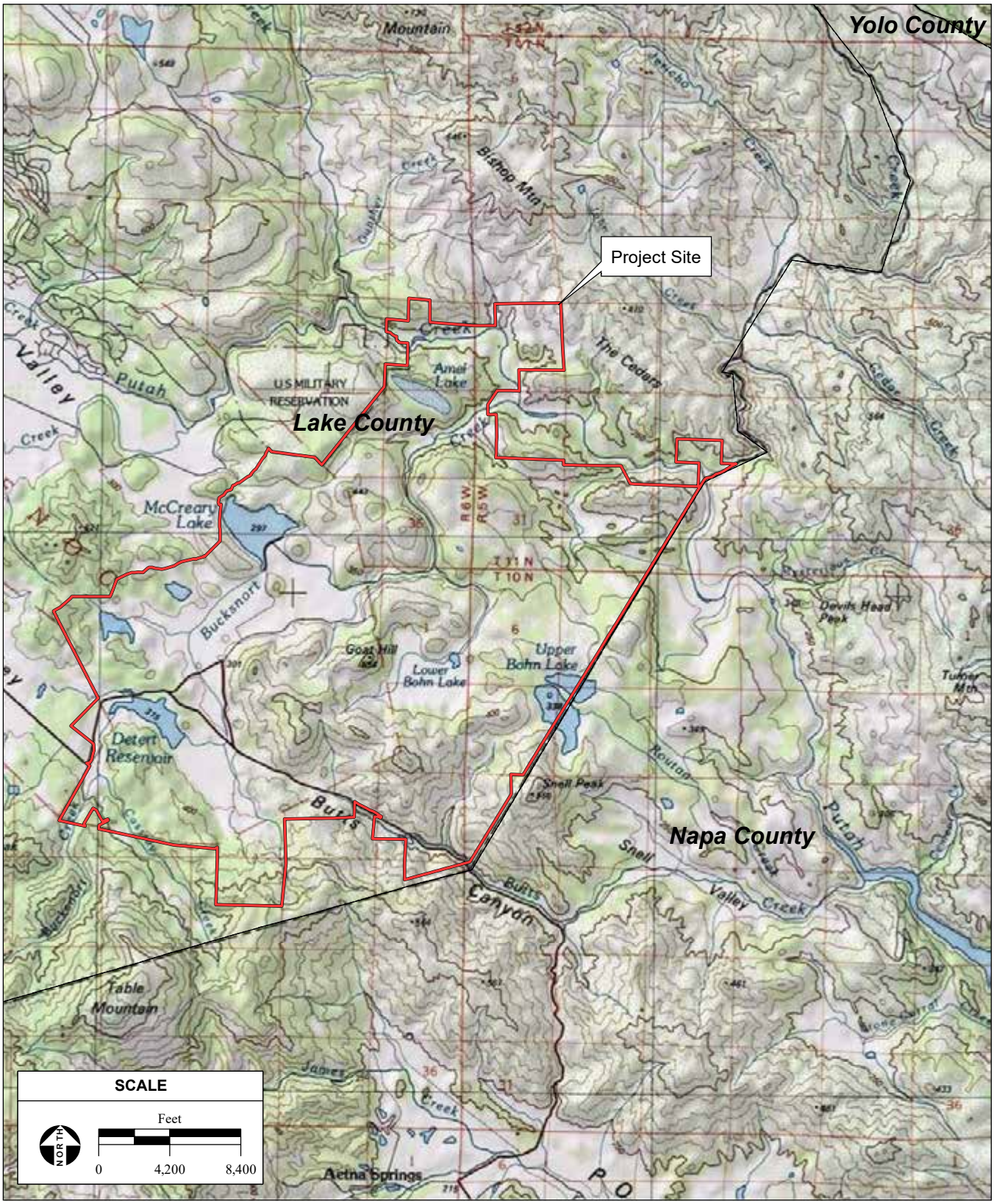
1.2 EXISTING USES

The current land uses within the Guenoc Valley Site are a mixture of agriculture, recreation, and open space. These land uses utilize existing water rights, which allow for irrigated pastures, dry land grazing and open space, vineyards, golf courses, and water bodies (reservoirs). The main reservoirs on the Guenoc Valley Site and connected reservoirs provide approximately 10,390 acre feet of water storage. The agricultural activities include cattle and sheep grazing and vineyards.



SOURCE: NatGeo 2017; AES, 2/18/2020

Figure 1
Regional Location



SOURCE: "Middletown, CA" & "Jericho Valley, CA" & "Knoxville, CA" & "Detert Reservoir, CA" & "Aetna Springs, CA" & "Walter Springs, CA" USGS 7.5 Minute Topographic Quadrangles; T10N R5W & T10N R6W & T11N R5W & T11N R6W; Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, and Unsectiond Areas of Middletown, Jericho Valley, Detert Reservoir, and Aetna Springs, Mt. Diablo Baseline & Meridian;
ESRI 2019; AES, 2/18/2020

Figure 2
Site and Vicinity

The Guenoc Valley Site is currently farmed with 990 acres of vineyards, and an additional 970 acres of vineyard is anticipated and allowed pursuant to previous entitlements. The entitlement for water appropriation for use in vineyard irrigation, and the cultivation of land to vineyard was authorized by the Division of Water Rights following the Guenoc Ranch Water Rights Final EIR (AES, 2009). No additional vineyard area is proposed with the GVD or Phase 1, and approximately 1,700 acres of previously-approved vineyard will be placed under an Agricultural Preserve Combing Zoning district. Impacts to oaks resulting from the planting of the existing and expanded vineyards were mitigated for through provisions in the 2009 Water Rights FEIR (AES, 2009).

1.3 PROJECT DESCRIPTION

Development plans for Phase 1 are comprised of multiple resort communities including residential parcels, boutique hotels, an equestrian center, golf course, and other recreational attractions and associated roadways and supporting facilities. The Phase 1 would result in the development of the following six resort communities described in the Specific Plan of Development (SPOD; MAHA, 2019):

1. Equestrian Center Community - This community includes a clubhouse, stables, paddocks, manmade lake, and several riding arenas and polo fields. Residential parcels will also be located within this community.
2. Maha Farm Community - This community is designed around the existing agricultural history of the Ranch by establishing residential parcels with potential for vineyard or other agricultural development. Maha Farms also includes sales centers, a hotel, wineries, barns, and other supporting infrastructure.
3. Red Hills Estates Community - This community includes the Red Hill hotel, residential parcels, and an 18-hole golf course with clubhouse.
4. Bohn Ridge Resort Community - This community consists of the Bohn Ridge hotel and surrounding residential parcels.
5. Spa Community - This community consists of a few residential parcels, a walking path, and the main spa building.
6. Resort at Trout Flat Community - This community includes residential parcels, resort cottages, and a hotel.
7. Camping Area: This area includes semi-permanent tent structures to provide short-term guests with high-end “glamping” recreational opportunities that are set back from the larger resort communities.

These communities plus supporting infrastructure and workforce housing are included within the Proposed Project. Phase 1 of the Proposed Project will result in multiple hotels, resort residential units near hotels, residential estate villa units, short term staff hotel rooms, campsites, and workforce housing units (i.e. bedrooms). Future phases and the approval of the GVD anticipates up additional hotel units, resort residential units, residential estate units, and additional supporting workforce housing units/bedrooms. A map outlining the different resort communities shown with identified oak habitat impacts is presented in **Attachment A**. Future phases of development are anticipated to include additional hotel units, resort residential units, residential estate units, and supporting workforce housing units. All phases and all aspects of development will occur entirely within Lake County.

2.0 IMPACTS TO OAKS

Oak woodland habitat is a unique component of California's natural heritage. Oak trees serve several important ecological functions including temperature moderation, reduction of soil erosion, facilitation of nutrient cycling, and maintenance of water quality. Oak woodlands also have inherent aesthetic value, are a characteristic feature of the state, and have cultural significance to Native Americans. In addition, oak woodlands provide essential habitat and/or food for many wildlife species including insects, invertebrates, amphibians, reptiles, birds, and mammals.

2.1 IMPACT MINIMIZATION MEASURES

Minimization measures are included as part of the project design where possible in order to minimize oak impacts. Minimization measures include maximum avoidance of oak woodland and individual oaks, maximum avoidance of sensitive habitat that supports oaks and oak dispersal, and incorporation of oaks into landscape design.

Following the sale of a residential lot, a development plan for that lot will follow the general outline described below:

- Residential lots larger than two acres that are entirely within oak woodland habitat will be restricted to a one-acre maximum buildable area. This buildable area is designed to provide footprint size and location guidance to avoid impacts to oaks within residential lots.
- For residential lots in which a significant impact to canopy cover is unavoidable, the impact will be analyzed for the grading, driveways, and building areas, not to exceed 1.5 acres. Mitigation for this type of impact will occur through recordation of same-species oak woodland in long term preservation prior to the issuance of building or grading permits.
- For impacts in which cover is sparse, or significant woodland impacts can be avoided, an exact tree removal and size inventory will be required prior to a building or grading permit. The mitigation will include transplanting, compensatory planting, and/or enhancement as described below.
- These methods will be applied to residential lots developed as a result of either Phase 1 or future phases of development.

In addition to the general impact minimization measures, development of commercial lots has followed the general outline below:

- The footprint of development was reduced to only that area required for the function and design of a commercial lot.
- Placement of structures maximized avoidance oak woodlands.
- Individual oaks will be preserved or transplanted through intentional landscaping or design.
- For commercial lots in which a significant impact to canopy cover is anticipated, the impact will be analyzed for as the greatest maximum potential impact and mitigated through oak woodland preservation prior to impacts.
- For impacts in which cover is sparse, or significant woodland impacts can be avoided, an exact tree count and size inventory will be required followed by mitigation through transplanting, compensatory planting, and/or enhancement as described below.

2.2 OAK IMPACTS BY HABITAT TYPES

Approximately 5,691.8 acres of the Guenoc Valley Site has been identified as oak woodland. A total of 1,238.7 acres of oak woodland is defined as oak savanna for the purposes of this report. Oak savanna is a sub-type of oak woodland consisting of an oak canopy cover of 10 to 60 percent and was generally observed with less than 2/3 of canopies touching (WRA, 2020a; WRA 2020b). **Table 1** provides a summary breakdown of oak habitats impacted by Phase 1.

Infrastructure impacts were calculated based on linear impact features such as roadways along with a thirty-foot grading buffer on each side. Acreages were calculated for illustrative purposes to show the scale of potential impacts. Because of the ability to design around specific oak trees, roadway impacts will be addressed on a tree-by-tree basis and will likely be much lower that presented in **Table 1**. Maximum potential impacts for residential lots are based on the 1.5-acre allowable development area set by the GVD for a given parcel and a 1.0-acre lot development restriction on a parcel that lies entirely within oak woodland habitat, which will be recorded with the parcel's final map. Maximum potential impacts for commercial lots are based on the maximum development footprint as proposed in the Specific Plan of Development (SPOD) for the intended use of the lot positioned to minimize potential impacts to oaks and includes the building footprint as well as the grading extent area.

Vegetative cover in oak savanna habitat is typically dominated by non-native annual grasses with interspersed individual oaks. Oak savanna impacts described in **Table 1** are based on the total acreage of oak savanna rather than representative acreage based on percent cover of oaks. Similar to roadway impacts, because of the low density of trees and the ability to avoid them, oak savanna impacts may be measured on a tree-by-tree basis for the purpose of mitigation.

TABLE 1
OAK HABITAT TYPES AND POTENTIAL PHASE 1 IMPACTS BY ACREAGE

Habitat Type	Acres on Guenoc Valley Site	Maximum Roadway Impacts	Maximum Residential Impacts	Maximum Commercial Impacts	Maximum Potential Impacts
Interior Live Oak Woodland	756.5	19.0	31.0	22.0	72.0
Valley Oak Woodland	49.3	1.0	0.0	1.0	2.0
Blue Oak Woodland	3,472.4	91.0	97.0	69.0	257.0
Mixed Oak Woodland	174.9	0.0	0.0	0.0	0.0
Blue Oak Savanna	1,238.7	50.0	52.0	44.0	146.0
Total	**5,691.8**	**161.0**	**180.0**	**136.0**	**477.0**
Source: WRA, 2020a; WRA 2020b; **Attachment A**					

Oak Woodland

The project site contains interior live oak woodland, valley oak woodland, blue oak woodland, and mixed oak woodland. This habitat type was identified in a Biological Resource Analysis performed by WRA Inc. (BRA; WRA, 2019). Oak habitat identified was overlaid on a georeferenced map of the Phase One development in order to determine potential impacts. Identification of oak woodland impacts from future development phases will be performed in a similar fashion. A maximum of approximately 220 acres (**Table 1**) of oak woodland habitat has the potential to be impacted by residential and commercial development. Potential impacts from future development will be assessed in a similar fashion. Roadway impacts of approximately 111 acres of oak woodland along 7.5 miles of roadway will be

defined through tree counts as specified in detail in **Section 3.0** as impacts to individual oaks may be avoided.

Blue Oak Savanna

The project site includes 1,215 acres of blue oak savanna where oak trees occur, but in lower density than in oak woodlands described above. This habitat type was identified by areas of lower-density oak presence interspersed within a grasslands-type setting that was verified through aerial imagery, biological surveys, and GIS mapping overlaid with the development footprint. Specifically, an oak savanna is identified as a subset of oak woodland with 10 to 60 percent total canopy cover and generally has less than 2/3 of the canopies touching (WRA, 2020a; WRA, 2020b). Identification of oak savanna impacts from future development phases will be performed in a similar fashion. The Proposed Project has the potential to impact up to 96 acres of oak savanna within commercial and residential development as well as approximately 50 acres of oak savanna along 4.5 miles of roadway. However, the majority of this habitat type is dominated by herbaceous cover and the impacts to individual oaks may be avoided. Therefore, impacts to oak savanna may be defined through tree counts or through acreage impacted as specified in **Section 3.0**.

Mixed Oak Woodland

The project site includes 175 acres of mixed oak woodland. Mixed oak woodland is comprised of multiple co-dominate oak species and, in some cases, non-oak species. This habitat type was identified by areas with mixed oak species interspersed within a larger canopy co-dominated by other tree species. Mixed oak habitat mapping was verified through aerial imagery, biological surveys, and GIS mapping overlaid with the development footprint. There are no anticipated impacts to mixed oak woodland during Phase 1 of construction. Potential impacts from future development will be assessed in a similar fashion. Depending on the canopy cover of sensitive oaks within mixed oak woodlands, potential impacts may be measured based on acreage or on a tree-by-tree basis.

Oaks Occurring Outside of Mapped Oak Habitat

Because of the continuous nature of habitat types on the Ranch, it is likely that the Proposed Project will result in impacts to individual oak trees present within habitat types for which they are not a dominant species. Individual oaks, specifically blue oaks, have occasionally been observed on the project site within other habitat types such as foothill pine woodland. While an acreage cannot be assigned to oaks potentially occurring throughout the project site, these impacts are to be mitigated for on a tree-by-tree basis as defined in **Section 3.0**.

3.0 PROPOSED OAK MITIGATION PLAN

3.1 MITIGATION GOALS AND OBJECTIVES

Oak habitat on site will be avoided to the maximum extent possible to preserve the aesthetic, ecological, and cultural benefits provided by oaks. Acreages calculated in **Table 1** are based on the reduced impacts as a result of avoidance measures outlined in **Section 2.1**.

The goal of this Plan is to replace the function and value of impacted oak habitat as a result of the Proposed Project. The impacts from the Proposed Project will be fully mitigated in compliance with the 2009 Water Rights EIR, 2008 Oak Tree Replacement Plan, and Lake County General Plan. Success metrics will be utilized to meet mitigation criteria and ensure long-term success of the oak mitigation. Proposed mitigation is comprised of protecting existing oak woodlands as possible and creating or

enhancing habitat in suitable locations. These mitigation methods are described in detail below.

3.2 Oak Mitigation Recommendations by Impact Type

As described in **Section 2.1**, the Proposed Project has the potential to impact oak woodland, oak savanna, and individual oak trees. Impacts to these habitat types can be further described by the level of impact. Therefore, mitigation is best determined through an analysis of the habitat types and the level of impact. **Table 2** provides a mitigation matrix summary following the methods described below.

Impacts to Oak Woodland with Significant Loss of Canopy Cover

While impact minimization measures have been incorporated as part of the Proposed Project (**Section 2.1**), the Proposed Project has the potential to impact oak woodland such that a significant loss of canopy cover may occur. In this circumstance, suitable mitigation will occur through preservation of in-kind habitat at a ratio of 3 acres preserved to 1 acre of impacts to valley oak woodland, and 2 acres preserved to 1 acre of impacts for all other oak woodland types. These methods apply to residential and commercial lot development for which a qualified biologist has determined that a significant loss of cover has occurred. This method of mitigation is suitable for Phase One and future phases of development. A qualified biologist will work with the Applicant in cases of impacts to oak savanna to determine if mitigation will occur though acreage preservation or a tree-by-tree count and replanting.

Impacts to Oak Woodland without Significant Loss of Canopy Cover

Due to impact minimization measures presented in **Section 2.1**, the Proposed Project will likely have impacts on individual oak trees within oak woodland habitat such that the overall character and quality of the habitat is not significantly impacted. Consistent with the Biological Resources Assessment of the Guenoc Valley Site, impacts that result in a reduction in woodland canopy cover to 60 percent or less and less than 2/3 of the canopies touching would be considered conversion of habitat from oak woodland to oak savanna. In circumstances where removal of trees does not convert oak woodland to oak savanna, the following mitigation is recommended:

- For oaks removed with a diameter at breast height (dbh) between 3 inches and 15 inches, full transplant or replanting at a 2:1 ratio as detailed in **Section 4.0**.
- For oaks removed with a diameter at breast height of 15 inches or greater, transplantation or replanting at a 5:1 ratio as detailed in **Section 4.0**.
- For oaks that are transplanted, they will be monitored for the success of transplanting as described under **Section 5.0** and replaced via replanting ratios described above should the transplanting fail.
- Locations of removed oaks will be documented such that oaks removed within a POU will result in compensatory plantings within POU consistent with the 2009 Water Rights EIR. The Phase I of the GVD proposes approximately 32 acres of potential impact to oaks within the POU, which will be mitigated in accordance with the 2009 Water Rights EIR requirement for like compensation within POU. In addition to this existing requirement, the 32 acres will also comply with this Oak Mitigation Plan as summarized in **Table 2** below.

These methods apply to oaks impacted by infrastructure and fire-protection vegetation management. These methods also apply to residential and commercial lot development for which a qualified biologist has determined that a significant loss of cover has not occurred. This method of mitigation is suitable for Phase 1 and future phases of development.

TABLE 2

SUMMARY MATRIX OF RECOMMENDED OAK MITIGATION

Habitat Type	Habitat Impact Type	Mitigation Recommended
Interior Live Oak Woodland	Significant loss of oak canopy cover	Preservation of interior live oak woodland at a 2:1 ratio
	No significant loss of canopy cover	Exact tree count followed by replanting interior live oak at the following ratios: ▪ 2:1 for dbh 3”-15” ▪ 5:1 for dbh > 15” Transplanted trees that fail are subject to these replanting ratios.
Valley Oak Woodland	Significant loss of oak canopy cover	Preservation of valley oak woodland at a 3:1 ratio
	No significant loss of canopy cover	Exact tree count followed by replanting of valley oak at the following ratios: ▪ 2:1 for dbh 3”-15” ▪ 5:1 for dbh > 15” Transplanted trees that fail are subject to these replanting ratios.
Blue Oak Woodland	Significant loss of oak canopy cover	Preservation of blue oak woodland at a 2:1 ratio
	No significant loss of canopy cover	Exact tree count followed by replanting of blue oak at the following ratios: ▪ 2:1 for dbh 3”-15” ▪ 5:1 for dbh > 15” Transplanted trees that fail are subject to these replanting ratios.
Mixed Oak Woodland	Significant loss of oak canopy cover	Preservation of mixed oak woodland at a 2:1 ratio
	No significant loss of canopy cover	Exact tree count followed by replanting mixed oak at the following ratios: ▪ 2:1 for dbh 3”-15” ▪ 5:1 for dbh > 15” Transplanted trees that fail are subject to these replanting ratios.
Blue Oak Savanna	Any impact	Exact tree count followed by replanting blue oak at the following ratios: ▪ 2:1 for dbh 3”-15” ▪ 5:1 for dbh < 15” Transplanted trees that fail are subject to these replanting ratios. OR Preservation of oak savanna at a 2:1 ratio
Individual Oak	Any impact	Exact tree count followed by replanting in-kind oak at the following ratios: ▪ 2:1 for dbh 3”-15” ▪ 5:1 for dbh < 15” Transplanted trees that fail are subject to these replanting ratios.

Impacts to Oak Savanna

Impacts to oak savanna may be mitigated for through in-kind preservation at a 2:1 ratio, or through an exact tree count and replacement plantings. This method of mitigation is suitable for Phase One and future phases of development.

Impacts to Individual Oaks

Impacts to oaks that occur outside of habitat mapped as oak woodland or oak savanna will be handled in the same manner as impacts to oak woodland without significant loss of canopy cover. This method of mitigation is suitable for Phase One and future phases of development.

4.0 OAK MITIGATION

Detailed tree counts will be maintained as necessary in order to ensure full mitigation within the appropriate area of the Guenoc Valley Site.

4.1 OAK WOODLAND PRESERVATION

A significant portion of oak woodland within the development area is avoided through residential development restriction or project design. The area of potential oak woodland preservation was identified based on the type and quality of habitat impacted by the Proposed Project. **Attachment A** shows potential oak impacts resulting from Phase 1 and illustrates the existing and proposed preservation areas under Phase 1. Of the oak preservation presented in **Attachment A**, a total of 464 acres are preserved within Lake County and located within the POU pursuant to the 2009 Guenoc Valley Water Rights FEIR (AES, 2009). In addition to the 464 acres of oak woodlands required to be preserved within Lake County and located within the POU, 853 acres of oak woodlands are in long term preservation within the Preserved Open Space Area, which will be in long-term management, for a total of 1,317 acres of existing preserved oak woodlands. Additionally, based on a preservation ratio of 3 acres to 1 acre impacted for valley oak woodland and 2 acres to 1 acre impacted for other oak woodland, additional acres of oak woodland would be preserved through restrictions on residential lot development and avoidance of woodland within commercial lots. The total area of existing and proposed oak preservation within the Guenoc Valley Site following Phase 1 development would be 1,633 acres. **Table 3** shows a summary of proposed oak preservation areas related to Phase 1 impacts.

TABLE 3
PHASE 1 MAXIMUM OAK WOODLAND PRESERVATION REQUIREMENTS FOLLOWING IMPACT MINIMIZATION

Habitat Type	Maximum Acres of Significant Cover Loss	Maximum Acres Required for Preservation
Interior Live Oak	53	106
Valley Oak	1	3
Blue Oak	166	332
Mixed Oak	0	0
Oak Savanna	96	192
Total	**316**	**633**

Acres of oak woodland preservation will be protected prior to the issuance of a building or grading permit of a commercial property or the recordation of the final map prior to the sale of a residential parcel. This Oak Mitigation Plan will serve as an agreement between the property-holder of the Guenoc Valley Site and Lake County, restricting future development on the identified oak woodland preservation areas. Any future modification of such preservation areas would require additional identification of oak preservation such that acreage of preserved oak woodland by species is not lost. Since these conservation areas will be filed as a deed restriction and recorded as a development restriction on the title, a formal conservation easement filed with Lake County is not necessary.

4.2 OAK TREE PLANTING

Because exact tree counts are dependent upon final development plans, this section serves to outline a method for determining suitable oak planting locations. Suitable oak habitat replacement or preservation should be of similar quality to support successful oak establishment.

Additionally, locations for mitigation plantings should consider practicality of planting and maintenance based on the location. Oaks may be planted in suitable habitat where oaks to not substantially occur, or where cover is low. These locations also considered surrounding land use and targeted those areas most likely to be preserved throughout all phases of development. Potential locations were selected for plantings based on suitable supporting habitat, continuity of the landscape, and other metrics that would increase the success and functionality of mitigation plantings. Selection also considered the accessibility of the location for the purpose of planting, maintenance, and monitoring. Habitat of similar quality and practicality for mitigation plantings may be utilized.

A qualified biologist will confirm the tree removal count and the required number of compensatory plantings for a development area. Tree counts and planting locations will be carefully documented in order to ensure compliance with this Plan. Oak plantings will be initiated no later than the suitable planting season following oak removal for which a parcel or area of development has been impacted. Oak seedlings will be planted with the intent of replacing not only the trees themselves, but restoring the functionality of the habitat impacted by the Proposed Project.

Source and Size of Mitigation Plantings

Oak planting required for mitigation may be obtained from a variety of sources. An on-site nursery currently produces seedlings from acorns collected on site and could be used to provide for a portion of plantings. Direct plantings of acorns and seedlings collected on site may also occur. Each individual oak planting, whether it be sourced from the nursery or planted directly, will count as one individual for the sake of tree replacement mitigation ratios, and subject to the monitoring requirements outlined in **Section 5.0**. Should needs exceed the on-site production of acorns and seedlings, locally sourced nurseries within 200 miles of the project site may be used to provide seedlings.

Transplanting of Oak Trees

When possible, transplanting of trees removed during development will also be used in oak woodland creation areas. Due to the value of mature trees, preferential selection for transplanting should be given to those trees with a dbh equal to or greater than 15" when possible. If the tree planned to be removed is successfully transplanted, then there is no additional required mitigation. Transplanted trees will be monitored as outlined in **Section 5.0**. Should a transplanted tree fail, replanting as outlined in **Section 2.2** will occur. The following outlines the methods used for transplanting of oaks previously performed on the Guenoc Valley Site to be used for oaks transplanted through construction of the

Proposed Project:

- Select tree to be salvaged / transplanted;
- Evaluated current health of selected tree taking into consideration age, vigor, presence of sickness, fungus, pest/disease;
- Evaluate the type and conditions of the soil where the tree is growing (sandy, rocky, clay, etc.). Root pruning and transplant methods will vary based on these conditions;
- Evaluate labor and machinery available to transplant. Size of root ball, root-pruning methodology and system of containerization will vary based on these variables;
- Determine root ball dimensions based on size of tree, conditions of soil, and target final weight of root ball/tree;
- Initiate exploratory digging around root ball perimeter. This exploratory dig will reveal extent of lateral root system and soil profile;
- Once root ball perimeter is determined and marked, initial digging is initiated around all or a portion of the root ball;
- Depending on the species and its root system, often main lateral roots are left intact to a) minimize shock to the tree and b) to maintain tree stability, so it does not fall down;
- Ideally perform initial root ball digging during the dormant season;
- Once the first stage of root ball digging is complete, the ball is wrapped tightly in heavy duty black plastic, or a layer of burlap followed by then black plastic. The purpose of this is to retain humidity within the root ball while reducing direct sunlight on the exposed roots;
- Depending on the tree species, the tree will often be left for a matter of months or even up to a year following the initial root prune. The purpose of this is to allow the tree to recover from the shock of root pruning prior to cutting main lateral roots and lifting the tree;
- During this rest period the tree is regularly monitored for overall health and to ensure adequate moisture, etc.;
- The following stage involves gradual cutting of lateral roots, finalized shaping of the root ball and in many cases, construction of a box or container around the root ball. Very heavy trees will often be lifted from this box;
- Once the tree is containerized, the tree is ready to be lifted. Ideally this will occur during or just prior to a dormant season (typically fall or winter), although this is not always possible;
- Lifting / transplant methods vary from species to species and are also dependent on soil type, proximity of tree to final planting location, and the type of machinery being used to transplant. In the case of blue oaks, a large articulating forklift is used to lift the tree from the bottom of the box. The tree is then transported by the articulating forklift to its designated staging area or final planting location., and
- Following tree extraction and relocation, the tree hole is backfilled, and erosion control measures are implemented.

Planting Specifications

There are several methods to increase the success of direct acorn plantings. The following specifications are to be followed for the collection and direct plantings of acorns:

- Collection of acorns for planting should occur within the same year that tree planting would occur. Acorns are ready to pick from trees when the acorn cap can be easily separated from the acorn without tearing the seed coat.
- If unable to plant acorns immediately, acorn caps should be removed, and acorns will be stored

under cool moist conditions until ready to be planted.

- Three to four acorns will be planted two to four inches deep on their side approximately three inches apart in order to maximize the germination success of at least one seedling.
- Organic mulch may be applied after planting, extending to a three to four-foot radius, and to a height of two to three inches over the top of the soil. Water following the planting.

The following planting specifications will be followed to increase the success rate for seedlings and transplanted trees:

- Should needs exceed the production capabilities of the on-site nursery, seedlings are to be sourced from a nursery that is growing trees from locally sourced acorns.
- Organic mulch will be applied after planting, extending to a three to four-foot radius and to a height of two to three inches over the top of the soil. Water following planting.
- Seedlings planted from starter pots are to be planted in holes dug slightly deeper than pot height and twice the width. Holes should be dug by hand when possible with smooth edges loosened to promote root growth.
- Any trees that are staked should be done so such that the straps are loose enough to allow for natural bending and movement of the tree while being tight enough to protect the tree from structurally damaging movements such as high-wind storms. Stakes should be removed following successful establishment.

Oak woodland planting areas should be planted with irregular spacing and clumps of trees to reflect the natural and aesthetic qualities of the existing oak woodlands.

Methods of Irrigation

Irrigation methods will vary based on the locations of the planting sites within the mitigation areas. Some planting sites may not need supplemental irrigation if there is a sufficient source of groundwater. If tree planting takes place during the rainy season, supplemental irrigation is not anticipated to be necessary during the first year. Irrigation methods for mitigation areas planted in the dry season will likely include the installation of temporary drip irrigation systems. Tree plantings will be irrigated in the absence of enough groundwater during the dry season in their first two years of growth in order to promote seedling survival. The plantings should not need to be irrigated during the wet season.

Planting Schedule

Acorn and seedling planting will be conducted between the months November and December, pending availability of seedlings or acorns. Planting during the fall will facilitate establishment of the planted acorns and seedlings during the rainy season. Plantings should begin no later than the first suitable planting season following oak tree removal for the Proposed Project.

Seedling Protection

In areas that have issues with herbivory, seedlings or acorn planting sites will be provided with adequate protection from damage to increase survival rates. These protections usually consist of tree shelters, or small wire mesh cages covering the seedling to reduce the likelihood that deer or other herbivores will consume the young trees. Mesh should be of an appropriate size to prevent entrapment of songbirds.

4.3 OAK HABITAT ENHANCEMENT

These areas may be used for tree-by-tree mitigation or restoration activities and will follow the specific planting instructions above. Oak habitat enhancement may occur in areas of oak savanna and pine-oak woodland but may include the enhancement of other mixed-oak habitat.

4.4 MITIGATION AREA MAINTENANCE

Maintenance of the mitigation areas will consist of weed removal, removal of trash and litter, inspection of tree shelters and wire mesh, fencing (as needed), irrigation systems, tree stakes, and inspection for evidence of vandalism or other uses conflicting with the goals of this Plan.

Weed Control

Three primary techniques are available for weed control maintenance activities in the oak planting areas: mowing, hand weeding, and herbicide application. Mowing and/or hand weeding are the preferred methods of weed control. If herbicides are used, they will be applied only by licensed personnel in strict accordance with the manufacturer's regulations. No herbicide should contact the leaves or stems of the oak trees. Herbicide use will be as restricted as possible; spot applications are preferred, and extreme care should be taken when applying herbicides in the vicinity of open water, wetlands, existing native vegetation, and revegetation plantings. No weed control is necessary in the oak preservation areas.

Removal of Trash and Litter

Trash and litter, which may blow into the mitigation areas, will be removed periodically. Any trash observed within the mitigation areas during the monitoring visits will be reported and/or removed.

Other Inspections

Planting equipment such as tree shelters, wire mesh, fencing, irrigation systems, or tree stakes if used, will be inspected during quarterly monitoring visits by a qualified biologist described in **Section 5.0** below. Instructions to correct any defects will be included in the biological monitoring reports. Evidence of any uses conflicting with the goals of this tree mitigation plan will be included in the monitoring reports.

Maintenance Schedule

The oak planting mitigation sites will be visited by the Ranch staff at least twice monthly during the first six months to assess the effectiveness of the irrigation system (if applicable) and to inspect any tree shelters, wire mesh, fencing, or tree stakes used. Quarterly visits, as described in **Section 4.3**, will also ensure that plantings and irrigation are functioning as designed. These quarterly visits will be performed by a qualified biologist throughout the remainder of the seven-year monitoring period, described further in **Section 5.0** below.

5.0 MONITORING PLAN

5.1 DATA COLLECTION

Mitigation sites will be inspected by a qualified biologist or certified arborist for seven years after planting. Monitoring site visits will involve assessing the status of the replacement plantings, determining the need for irrigation, identifying weeds for removal, and assessing the overall integrity

and success of the mitigation sites.

Monitoring reports will, at a minimum, include the following metrics of successful oak establishment: survival rates, overall health, dbh of mitigation plantings, and the status of competing woody vegetation. Criteria described below will apply to both Phase 1 and future phases of development.

5.2 SUCCESS CRITERIA

Oak Preservation Areas

The oak preservation areas do not have success criteria. Because the oak preservation areas are ecologically functional oak woodlands, these areas need only to be protected from future development in order to offset the impacts to oak woodlands elsewhere on the property.

Oak Habitat Planting Areas

The oak replanting mitigation will be considered successful when, after seven years, the tree plantings have achieved an 80 percent success rate. If additional plantings are necessary to increase the total plantings to meet the 80 percent survival rate, these seedlings will be monitored for a full seven years to ensure success of those additional plantings. Transplanted trees shall be monitored for a minimum of three years. A high level of replanting success is anticipated with the use of protective measures, along with placement of the plantings in appropriate habitat.

Oak Habitat Enhancement Areas

Oak woodland enhancement areas are deemed successful when, after seven years, the tree plantings have achieved an 80 percent success rate. If additional plantings are necessary to increase the total plantings to meet the 80 percent survival rate, these seedlings will be monitored for a full seven years to ensure success of those additional plantings. A high level of replanting success is anticipated with the use of protective measures, along with placement of the plantings in appropriate habitat.

5.3 REPORTING

A qualified biologist or certified arborist will inspect the site during planting to ensure that it is completed in compliance with this plan and to create a baseline of the locations for future inspections. Due to the size of the property, the projected development timeline, and the associated mitigation plan, restoration areas may be broken into Mitigation Units. Each Mitigation Unit will be mapped with an approximate tree count and submitted to Lake County immediately following mitigation plantings. A total of seven annual reports will be completed for each Mitigation Unit, with additional reports as necessary until all success criteria are met. Annual reports will include the quarterly report along with an analysis on the projected success of mitigation and any adaptive management recommendations.

The first annual inspection will occur approximately one year after installation and will include a report documenting the results of the monitoring efforts. Annual reports will be submitted to the Lake County within six months of the monitoring event for a total of seven years, starting the year following the initial planting. This reporting scheme will be followed such that all mitigation plantings on the Ranch associated with Phase 1 and future phases of development receive a full seven years of mitigation monitoring in order to reach success criteria, with additional mitigation and monitoring as needed to meet success criteria. Should adaptive management recommendations and supplemental plantings occur, the annual report will include the notice of new plantings needed to replace failed trees, along with documentation (summary data and photos) to illustrate the condition and location of plantings.

The report should include the success of natural revegetation, establishment, survival, and height of replacement tree plantings, and the status of the oak improvement area's competing woody vegetation.

5.4 SCHEDULE

Oak plantings may occur during the appropriate planting season prior to the development of the Proposed Project and must be initiated no more than one planting season following tree removal. The first annual monitoring of the mitigation sites will be conducted the year following the initial planting, with a total of seven yearly monitoring reports.

5.5 ADAPTIVE MANAGEMENT

If trees planted in the mitigation areas are deemed to be performing poorly, a contingency plan may be submitted to Lake County requesting modifications to this Plan. Modifications may only be requested related to the location and management of mitigation plantings and will not result in the reduction of plantings or success criteria described herein.

6.0 COMPLETION OF MITIGATION

Once the minimum seven-year monitoring period is completed and success criteria met for all mitigations, Lake County will be informed that the mitigation requirements have been completed. A qualified biologist will prepare the Notice of Completion of mitigation activities and will include the final annual report for each mitigation unit detailing the achievement of success criteria. Therefore, completion of mitigation activities will include the following reports and documentation:

- Mapping submitted to and approved by Lake County detailing all oak woodland preservation locations;
- Mapping submitted to and approved by Lake County detailing potential oak planting locations;
- Maps submitted to Lake County detailing Mitigation Units as they are designated;
- A minimum total of seven annual reports for each Mitigation Unit submitted to Lake County;
    - The first annual report will document the specific planting details such as location of plantings, species, number of trees, and other important tracking information.
    - Additional annual reports may be necessary if additional supplemental plantings occur.
    - A request may be sent to Lake County to amend mitigation planting location(s) and monitoring activities based on tree performance and subject to County approval.
- A Notice of Completion of mitigation activities submitted to Lake County; and
- A final site visit with the County, if requested by the County.

Lake County may require a site visit to confirm that the success criteria have been met and that the required mitigation has been completed. The landowner will retain the oak mitigation areas and will not use them in a way that significantly degrades the ecological value of the mitigation area without notice to and approval by the County. With prior notification, the property may be periodically inspected by the County to ensure compliance with this Plan.

6.1 ASSURANCE OF MITIGATION PERMANENCE

This document will serve as an assurance that the mitigation measures will be performed as described. Any future development of this property within Lake County will be bound to this agreement. Future development on the Ranch in Lake County occupied by oak trees, specifically the areas of oak replanting

and oak woodland preservation covered in this document, will require consent from Lake County. The landowner agrees to the mitigation and reporting requirements described in **Sections 3.0**, **4.0**, and **5.0**, and acknowledges that the completion of the mitigation described in **Section 6.0** does not permit the cutting or development of the oak mitigation areas.

Further development or cutting of oaks on this property beyond the Phase 1 and future phases of development plans outlined here would require consent from Lake County and consistency with this Oak Mitigation Plan. Future development plans would be contingent on the continued protection and upkeep of the oak preservation and oak replanting areas. The applicant consents to not implement any activity on the property that may result in an impact to oak woodland habitat or is inconsistent with this Plan without first consulting with the County. Therefore, modification of development plans not specifically authorized by this Plan will occur only with the understanding and required approvals by Lake County.

7.0 REFERENCES

Analytical Environmental Services (AES). 2008. *Langtry Farms Water Rights Modification Project Oak Tree Replacement Plan*.

Analytical Environmental Services (AES). 2009. *Guenoc Water Rights Modification Project Final Environmental Impact Report*.

Lake County. 2008. *Lake County General Plan*. Available online at: http://www.co.lake.ca.us/Page3939.aspx. Accessed June 2019.

MAHA Developments. 2019. Specific Plan of Development for the MAHA resort at Guenoc Valley.

Western Regional Climate Center (WRCC). 2016. Middletown, CA: Period of Record Monthly Climate Summary. Available online at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5598. Accessed June 2019.

WRA, Inc. (WRA), 2020a. Biological Resources Assessment for MAHA Resort and Guenoc Valley Development, Phase 1 Lake County, California.

WRA, Inc. (WRA), 2020b. Biological Resources Assessment for MAHA Resort and Guenoc Valley Development, Phase 2 and Open Space Lake County, California.

ATTACHMENT A

MAHA GUENOC VALLEY OAK PRESERVATION PLAN

GUENOC VALLEY MIXED USE DEVELOPMENT

OAK PRESERVATION PLAN

Updated June 1, 2020

The total preservation amount in the February 2020 Maha Guenoc Valley Oak Preservation Plan assumed that Blue Oak Woodlands, Interior Live Oak Woodlands, Mixed Oak Woodlands, and Valley Oak Woodlands would be mitigated based on the ratio of 1 acre impacted to 1.5 acres preserved basis.

This update assumes that Blue Oak Woodlands, Blue Oak Savanna, Interior Live Oak Woodlands, and Mixed Oak Woodlands will be mitigated based on a ratio of 1 acre impacted to 2 acres preserved and Valley Oak Woodland will be mitigated based on a ratio of 1 acre impacted to 3 acres preserved.

TABLE OF CONTENTS

PG **1** | OVERALL ESTIMATES
PG **2** | EXISTING OAK WOODLANDS COMMUNITIES
PG **3** | PROJECT IMPACTS TO OAK WOODLANDS
PG **4** | PROJECT AREA RATIO PRESERVATION OF OAK WOODLANDS

OVERALL ESTIMATES

EXISTING OAK WOODLAND COVERAGE

COMMUNITIES	BLUE OAK WOODLAND	BLUE OAK SAVANNA	INTERIOR LIVE OAK	VALLEY OAK WOODLAND	MIXED OAK WOODLAND	TOTAL
EXISTING OAK WOODLAND COVERAGE (PG 2)	**3,452 AC**	**1,215 AC**	**753 AC**	**50 AC**	**175 AC**	**5,645 AC**

TOTAL PROJECT SITE AREA: 16,000 AC

OAK WOODLANDS IMPACT AND PRESERVATION

	OAK WOODLANDS GREATEST POTENTIAL IMPACT			**OAK WOODLANDS AREA RATIO PRESERVATION**
PROPOSED ROADWAY DEVELOPMENT (PG 3)				
ROADWAYS[1]	161 AC / 12 MI[2]			—
	161 AC / 12 MI			
PROPOSED PROJECT (PG 3 & 4)	*BLUE OAK WOODLAND, INTERIOR LIVE OAK WOODLAND & VALLEY OAK WOODLAND*	*BLUE OAK SAVANNA*	**TOTAL[3]**	
VILLA & RESORT RESIDENTIAL PARCELS	128 AC	52 AC	**180 AC**	**579 AC**
COMMERCIAL & FACILITY PARCELS	92 AC	44 AC	**136 AC**	**255 AC**
RURAL LANDSCAPES	0 AC	0 AC	**0 AC**	**263 AC**
DESIGNATED OPEN SPACE	0 AC	0 AC	**0 AC**	**868 AC**
TOTAL	220 AC	96 AC	**316 AC**	**1,965 AC**[4]

[1] Oak woodlands impacted by roadway development, approximately 12 miles, will avoid trees with minor realignments and therefore are proposed to be mitigated with tree-by-tree replacement ratios as described in the Oak Mitigation Plan (OMP). Tree-by-tree replacement areas will happen pursuant to the OMP. Therefore, these impacts are not reflected in the "Project Area Ratio Preservation of Oak Woodlands" plan on page 4.

[2] Impact to oak woodlands impacted by roadways were initially disclosed as 12 miles in the February 2020 Maha Guenoc Valley Oak Preservation Plan ("February 2020 Oak Plan"). This 12 mile length was estimated based on the proposed roadway centerline overlapping with existing oak woodlands. Although oaks impacted by roadways will be mitigated with tree-by-tree replacement ratios, and not acreages, this updated plan converts the mileage impact to acres for consistency and clarity purposes and reports that up to 161 acres of oak woodlands could potentially be impacted by roadways based a standard impact buffer applied to all roadways.

[3] The February 2020 Maha Guenoc Valley Oak Preservation Plan disclosed impacts to Blue Oak Woodlands, Interior Live Oak Woodlands, Mixed Oak Woodlands, and Valley Oak Woodlands; Blue Oak Savanna impacts were not included in the numerical figures, as these were assumed to be mitigated on a tree-by-tree basis. This update assumes that Blue Oak Savanna will also be mitigated on an acre-by-acre basis.

[4] Please note that the total preservation amount in the February 2020 Maha Guenoc Valley Oak Preservation Plan assumed that Blue Oak Woodlands, Interior Live Oak Woodlands, Mixed Oak Woodlands, and Valley Oak Woodlands would be mitigated based on the ratio of 1 acre impacted to 1.5 acres preserved basis; this update assumes that Blue Oak Woodlands, Blue Oak Savanna, Interior Live Oak Woodlands, and Mixed Oak Woodlands will be mitigated based on a ratio of 1 acre impacted to 2 acres preserved and Valley Oak Woodland will be mitigated based on a ratio of 1 acre impacted to 3 acres preserved.

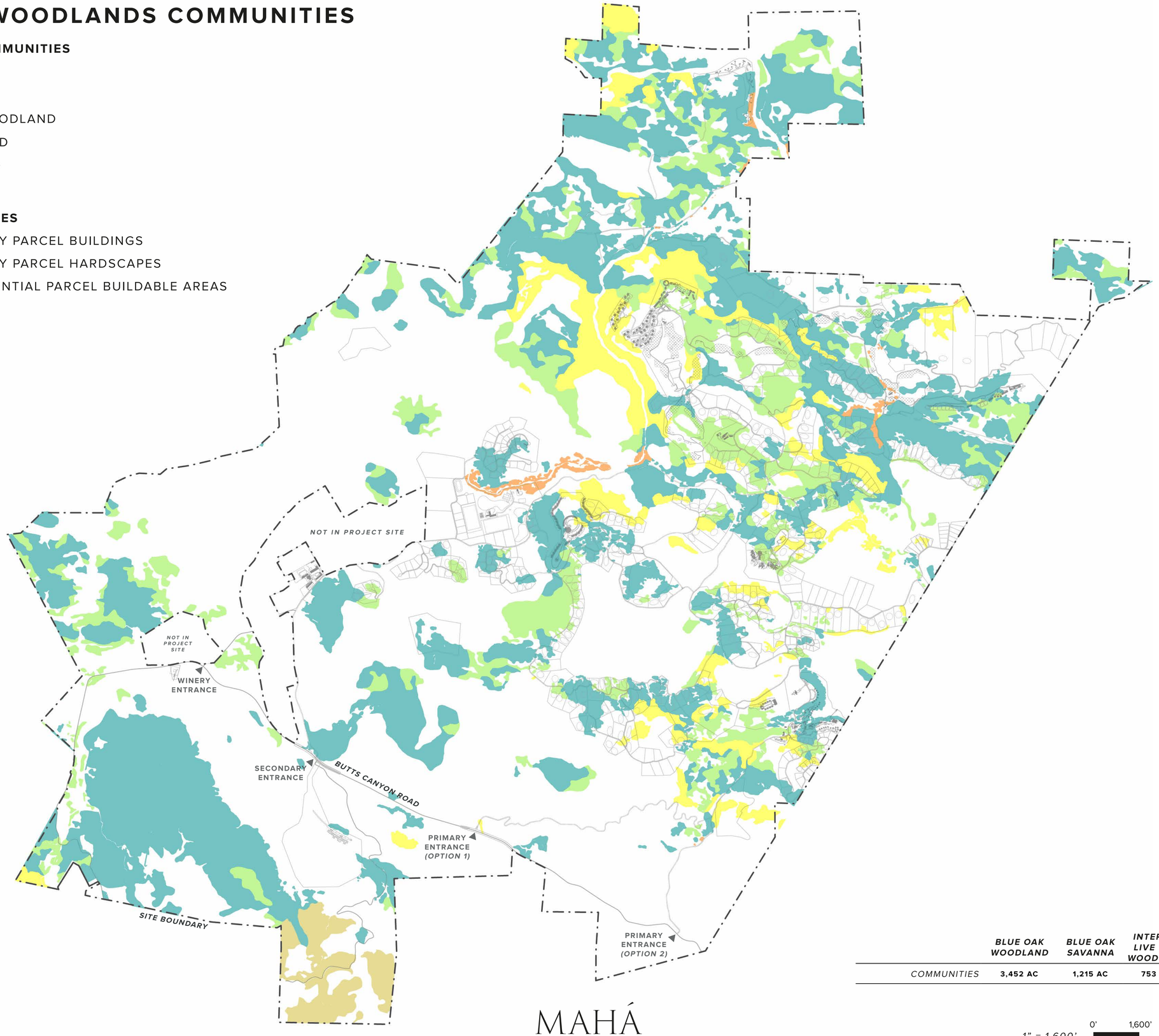
EXISTING OAK WOODLANDS COMMUNITIES

OAK WOODLANDS COMMUNITIES

- BLUE OAK WOODLAND
- BLUE OAK SAVANNA
- INTERIOR LIVE OAK WOODLAND
- VALLEY OAK WOODLAND
- MIXED OAK WOODLAND

DEVELOPMENT FEATURES

- COMMERCIAL & FACILITY PARCEL BUILDINGS
- COMMERCIAL & FACILITY PARCEL HARDSCAPES
- VILLA & RESORT RESIDENTIAL PARCEL BUILDABLE AREAS
- GOLF COURSE
- ROADWAYS
- PARCELS
- PROPERTY BOUNDARY



	BLUE OAK WOODLAND	BLUE OAK SAVANNA	INTERIOR LIVE OAK WOODLAND	VALLEY OAK WOODLAND	MIXED OAK WOODLAND	TOTAL
COMMUNITIES	3,452 AC	1,215 AC	753 AC	50 AC	175 AC	5,645 AC

1" = 1,600' 0' 1,600' 3,200' 6,400'

PROJECT IMPACTS TO OAK WOODLANDS

OAK WOODLANDS GREATEST POTENTIAL IMPACT IN PROPOSED PARCELS

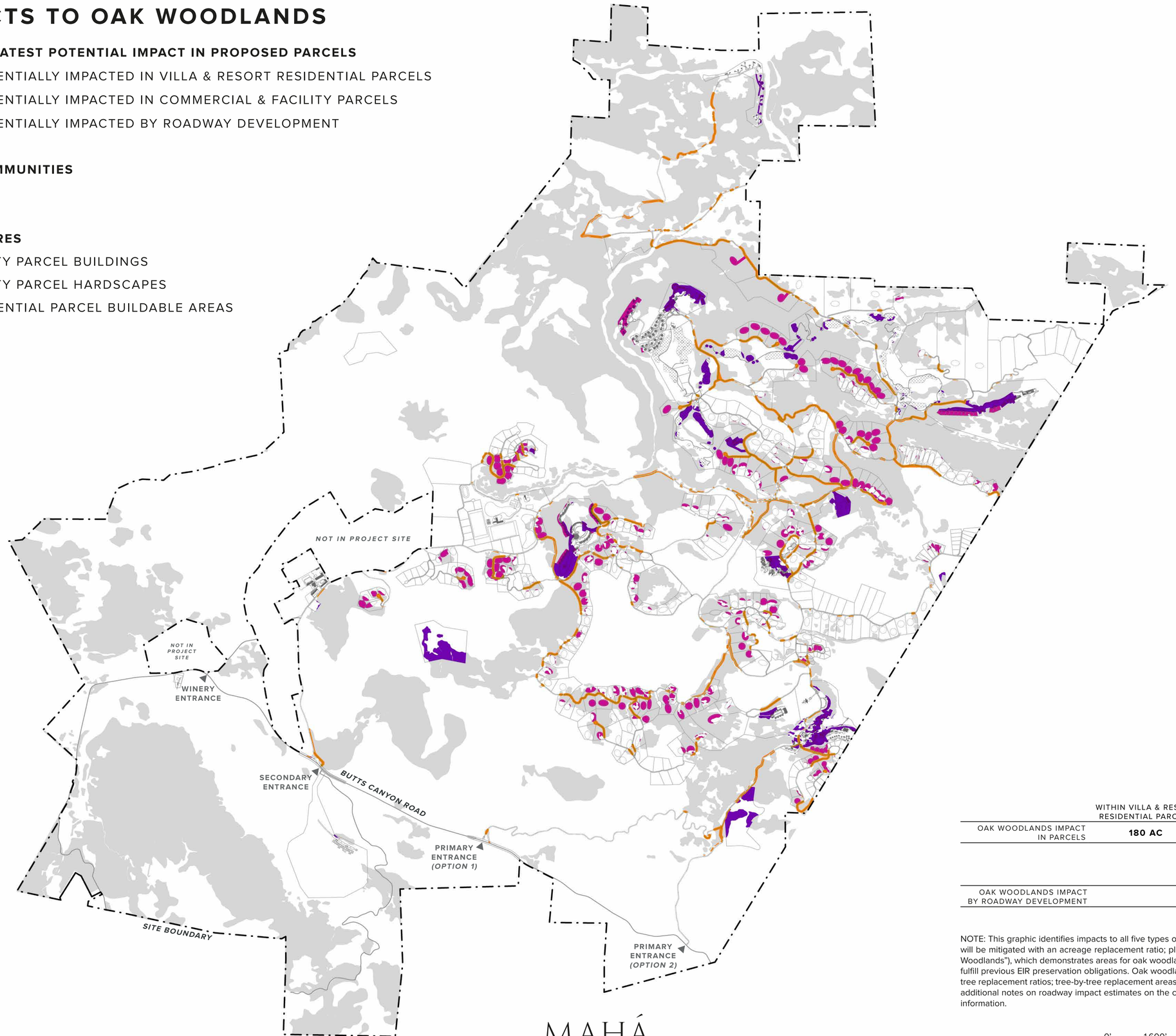
- OAK WOODLANDS POTENTIALLY IMPACTED IN VILLA & RESORT RESIDENTIAL PARCELS
- OAK WOODLANDS POTENTIALLY IMPACTED IN COMMERCIAL & FACILITY PARCELS
- OAK WOODLANDS POTENTIALLY IMPACTED BY ROADWAY DEVELOPMENT

OAK WOODLANDS COMMUNITIES

- OAK WOODLANDS

DEVELOPMENT FEATURES

- COMMERCIAL & FACILITY PARCEL BUILDINGS
- COMMERCIAL & FACILITY PARCEL HARDSCAPES
- VILLA & RESORT RESIDENTIAL PARCEL BUILDABLE AREAS
- GOLF COURSE
- ROADWAYS
- PARCELS
- PROPERTY BOUNDARY



	WITHIN VILLA & RESORT RESIDENTIAL PARCELS	WITHIN COMMERCIAL & FACILITY PARCELS	PARCEL IMPACT TOTAL
OAK WOODLANDS IMPACT IN PARCELS	**180 AC**	**136 AC**	**316 AC**

	TOTAL
OAK WOODLANDS IMPACT BY ROADWAY DEVELOPMENT	**161 AC / 12 MI**

NOTE: This graphic identifies impacts to all five types of oak woodlands. Oak woodlands impacted within parcels will be mitigated with an acreage replacement ratio; please see page 4 (“Project Area Preservation Ratio of Oak Woodlands”), which demonstrates areas for oak woodlands preservation to mitigate for these impacts and to also fulfill previous EIR preservation obligations. Oak woodlands impacted by roadways will be mitigated with tree-by-tree replacement ratios; tree-by-tree replacement areas will be identified on an ongoing and as-needed basis (see additional notes on roadway impact estimates on the cover page). Please see the Oak Mitigation Plan for further information.

1” = 1,600’

0’ 1,600’ 3,200’ 6,400’

MAHÁ
GUENOC VALLEY

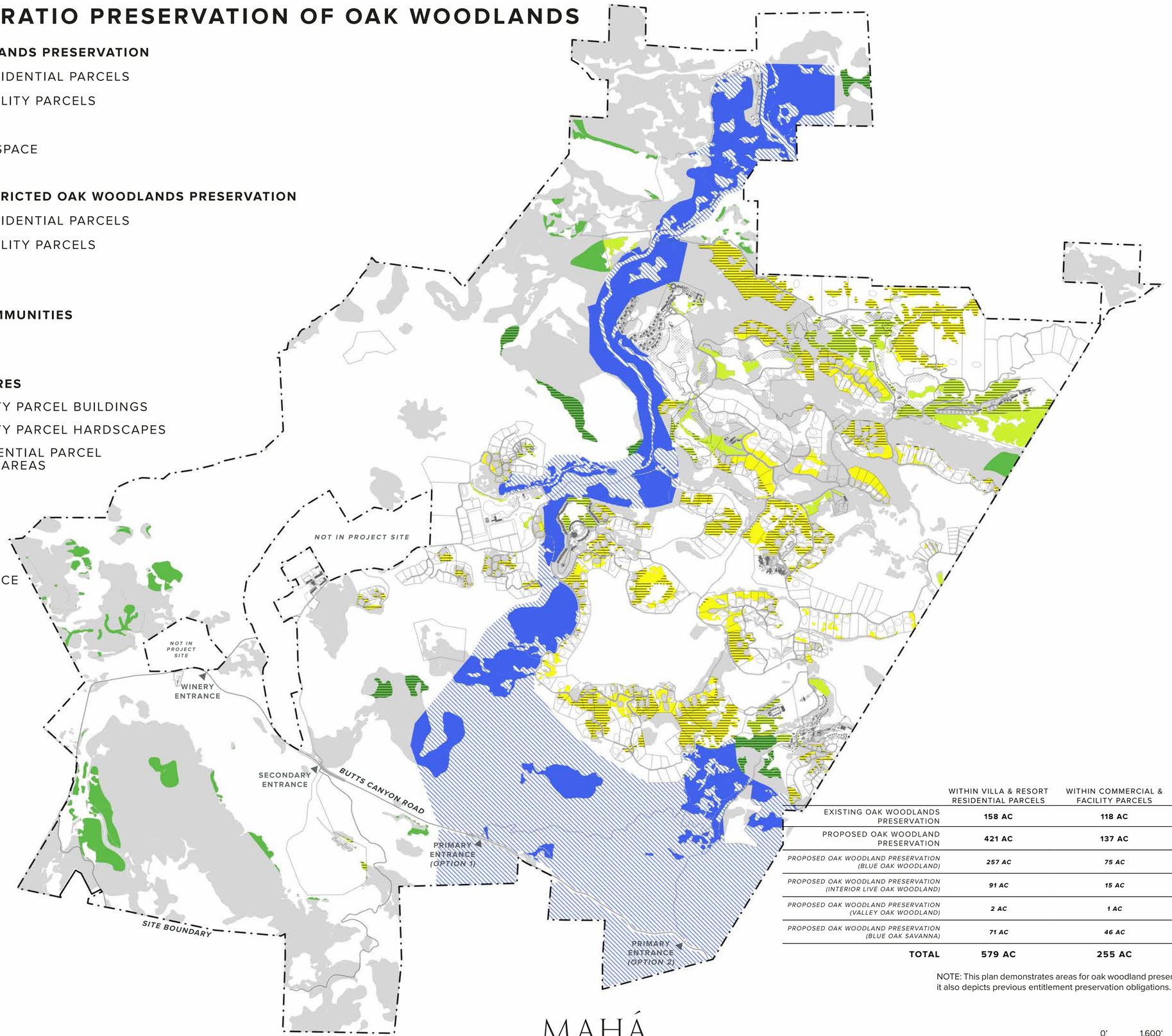
PROJECT AREA RATIO PRESERVATION OF OAK WOODLANDS

EXISTING OAK WOODLANDS PRESERVATION
- IN VILLA & RESORT RESIDENTIAL PARCELS
- IN COMMERCIAL & FACILITY PARCELS
- IN RURAL LANDSCAPES
- IN DESIGNATED OPEN SPACE

PROPOSED DEED-RESTRICTED OAK WOODLANDS PRESERVATION
- IN VILLA & RESORT RESIDENTIAL PARCELS
- IN COMMERCIAL & FACILITY PARCELS
- IN RURAL LANDSCAPES

OAK WOODLANDS COMMUNITIES
- OAK WOODLANDS

DEVELOPMENT FEATURES
- COMMERCIAL & FACILITY PARCEL BUILDINGS
- COMMERCIAL & FACILITY PARCEL HARDSCAPES
- VILLA & RESORT RESIDENTIAL PARCEL POTENTIAL BUILDABLE AREAS
- GOLF COURSE
- ROADWAYS
- PARCELS
- PROPERTY BOUNDARY
- DESIGNATED OPEN SPACE



	WITHIN VILLA & RESORT RESIDENTIAL PARCELS	WITHIN COMMERCIAL & FACILITY PARCELS	WITHIN RURAL LANDSCAPE	WITHIN DESIGNATED OPEN SPACE	TOTAL
EXISTING OAK WOODLANDS PRESERVATION	**158 AC**	**118 AC**	**188 AC**	**868 AC**	**1,332 AC**
PROPOSED OAK WOODLAND PRESERVATION	**421 AC**	**137 AC**	**75 AC**	–	**633 AC**
PROPOSED OAK WOODLAND PRESERVATION (BLUE OAK WOODLAND)	***257 AC***	***75 AC***	–	–	***332 AC***
PROPOSED OAK WOODLAND PRESERVATION (INTERIOR LIVE OAK WOODLAND)	***91 AC***	***15 AC***	–	–	***106 AC***
PROPOSED OAK WOODLAND PRESERVATION (VALLEY OAK WOODLAND)	***2 AC***	***1 AC***	–	–	***3 AC***
PROPOSED OAK WOODLAND PRESERVATION (BLUE OAK SAVANNA)	***71 AC***	***46 AC***	***75 AC***	–	***192 AC***
TOTAL	**579 AC**	**255 AC**	**263 AC**	**868 AC**	**1,965 AC**

NOTE: This plan demonstrates areas for oak woodland preservation to mitigate for impacts to oak woodlands, in addition it also depicts previous entitlement preservation obligations. Please see the Oak Mitigation Plan for further information.

1" = 1,600'

0' 1,600' 3,200' 6,400'

REVISED APPENDIX OSPP

AMENDMENT TO OPEN SPACE PRESERVATION PLAN

AMENDMENT TO OPEN SPACE PRESERVATION PLAN

GUENOC VALLEY RANCH

JUNE 2020

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
www.analyticalcorp.com

AMENDMENT TO OPEN SPACE PRESERVATION PLAN

GUENOC VALLEY RANCH

JUNE 2020

PREPARED BY:

Analytical Environmental Services
1801 7th Street, Suite 100
Sacramento, CA 95811
(916) 447-3479
www.analyticalcorp.com

TABLE OF CONTENTS

GUENOC VALLEY RANCH
OPEN SPACE PRESERVATION PLAN AMENDMENT

1.0 Introduction 1

1.1 Project Location 1
1.2 Project Desription 1
1.3 Project Impacts 4
1.4 Impact Minimization Measures 7

2.0 Existing Open Space Preservation Plan 8

2.1 Goals and Objectives 8
2.2 Existing Open Space Preservation Location 9
2.3 Adaptive Management Provisions 9

3.0 Proposed Open Space Preservation Amendment 9

3.1 Acreage Subject to Replacement from Open Space 12
3.2 Acreage Subject to Inclusion into Open Space 12

4.0 Open Space Area Maintenance and Monitoring 16

5.0 Assurance of Open Space Preservation 16

6.0 References 18

FIGURES

Figure 1 Regional Location 2
Figure 2 Site and Vicinity 3
Figure 3 Proposed Project Development Area 5
Figure 4 Existing Open Space Preservation Area 6
Figure 5 Revised Open Space Preservation Area 10
Figure 6 Habitat Types 11
Figure 7 Site Photos 14

TABLES

Table 1 Habitat Summary of Open Space Preservation Areas 7
Table 2 Habitat Summary of Acreage to be Replaced from Open Space 12
Table 3 Habitat Summary of Acreage to be Added in Open Space 13
Table 4 Special-Status Plants Within Open Space Modification 15

1.0 INTRODUCTION

The 2008 Open Space Preservation Plan (2008 OSP) addressed impacts related to the 2009 Water Rights Modification Project within the 24,000-acre Guenoc Valley Ranch (Ranch) (**Figure 1** and **Figure 2**). The Guenoc Valley District (GVD) is a proposed rezoning and planned development project located within the approximately 16,000-acre boundary portion of the Ranch exclusively within Lake County (Guenoc Valley Site). The first phase of development includes luxury resorts and a master-planned residential community to be sited in clusters (Phase 1), and future phases of development would result in similar design within the GVD (Proposed Project). The GVD incorporates low impact designs that prioritize large residential parcels with low density and clustered development, preserving surrounding open space and agricultural cultivation.

This amendment to the 2008 OSP addresses the portion of the Proposed Project that impacts the Open Space Preservation Area. This amendment identifies methods of alternate preservation of acreage, and presents an analysis on habitat quality and sensitivity to ensure that proposed preservation areas satisfy the goals outlined in **Section 2.1**.

1.1 PROJECT LOCATION

The Ranch is located at the border of Lake County and Napa County, CA (**Figure 1** and **Figure 2**). The Study Area consists of the area of impact that falls within the Phase 1 development footprint of the Ranch. Long Valley and Coyote Valley occur to the west of the Ranch, and the Cedar Mountains occur to the north. Terrain varies from areas of level valley to areas of steep, rocky terrain. Several vegetative communities occur within the Ranch including agriculture, annual grassland, oak woodland, pine-oak woodland, cypress forest, mixed conifer forest, and chaparral. Aquatic habitats include ephemeral drainages, perennial streams, seasonal wetlands, groundwater seeps, freshwater marsh, and manmade ponds and reservoirs. Climate of the area consists of hot dry summers and cool, moist winters. Annual precipitation averages approximately 44.1 inches, with zero to insignificant snowfall (WRCC, 2016).

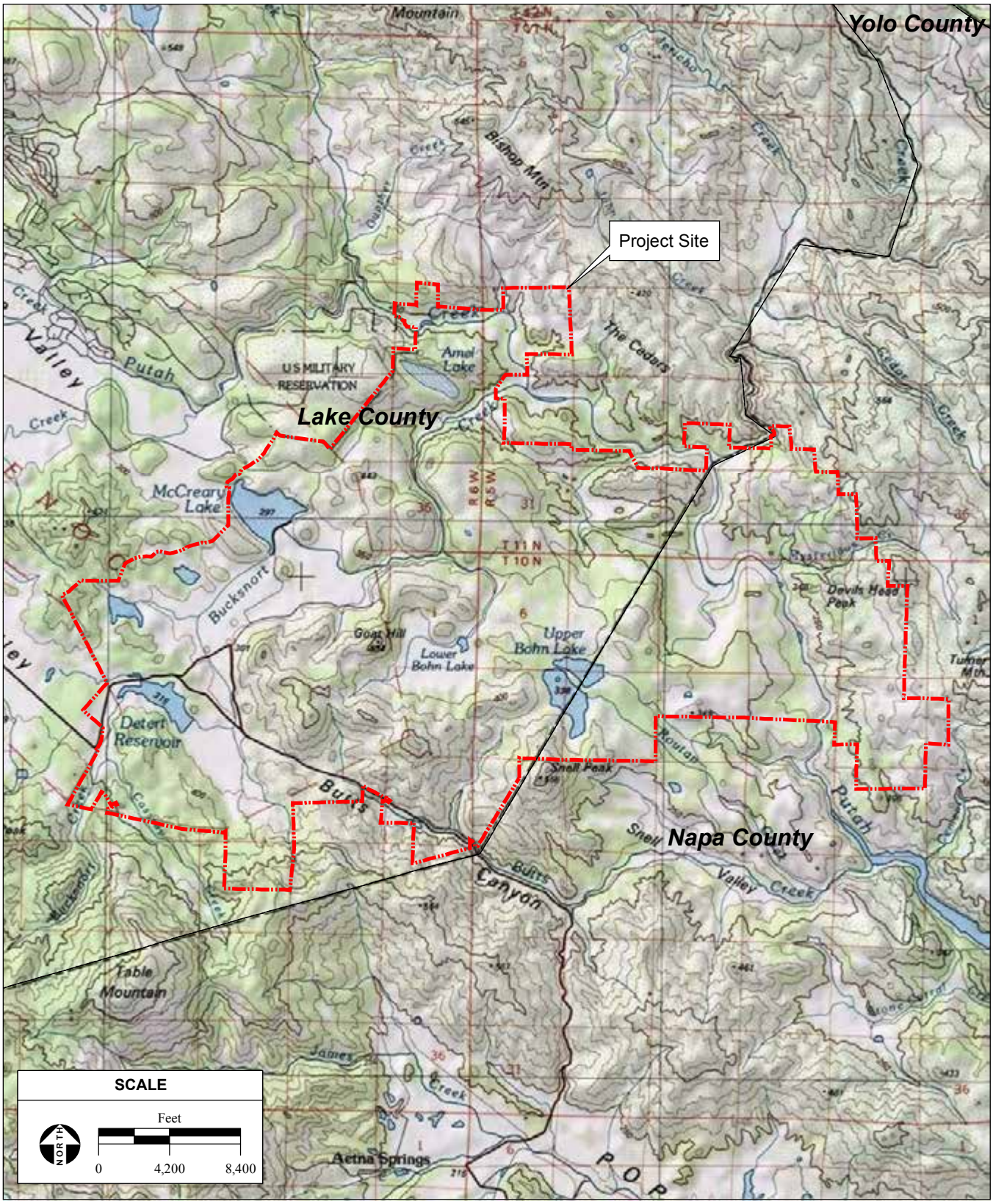
1.2 PROJECT DESCRIPTION

Development plans for Phase 1 of the Proposed Project are comprised of multiple resort communities including residential plots, hotels, an equestrian center, golf course, and other recreational attractions and associated roadways and supporting facilities. The Proposed Project would result in the development of seven resort communities described in the Specific Plan of Development (SPOD; MAHA, 2019), further summarized below.

1. Bohn Ridge Resort Community: This community consists of the Bohn Ridge hotel and surrounding residential parcels.
2. Equestrian Center Community: This community includes a clubhouse, stables, paddocks, manmade lake, and several riding arenas and polo fields. Residential parcels will also be located within this community.
3. Maha Farm Community: This community is designed around the existing agricultural history of the Ranch by establishing residential parcels with potential for vineyard or other agricultural development. Maha Farms also includes sales centers, a hotel, wineries, barns, and other supporting infrastructure.
4. Red Hills Estates Community: This community includes the Red Hill hotel, residential parcels, and an 18-hole golf course with clubhouse.

SOURCE: NatGeo 2017; AES, 7/30/2019

Figure 1
Regional Location



SOURCE: "Middletown, CA" & "Jericho Valley, CA" & "Knoxville, CA" & "Detert Reservoir, CA" & "Aetna Springs, CA" & "Walter Springs, CA" USGS 7.5 Minute Topographic Quadrangles; T10N R5W & T10N R6W & T11N R5W & T11N R6W; Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, and Unsectiond Areas of Middletown, Jericho Valley, Detert Reservoir, and Aetna Springs, Mt. Diablo Baseline & Meridian;
ESRI 2019; AES, 11/19/2019

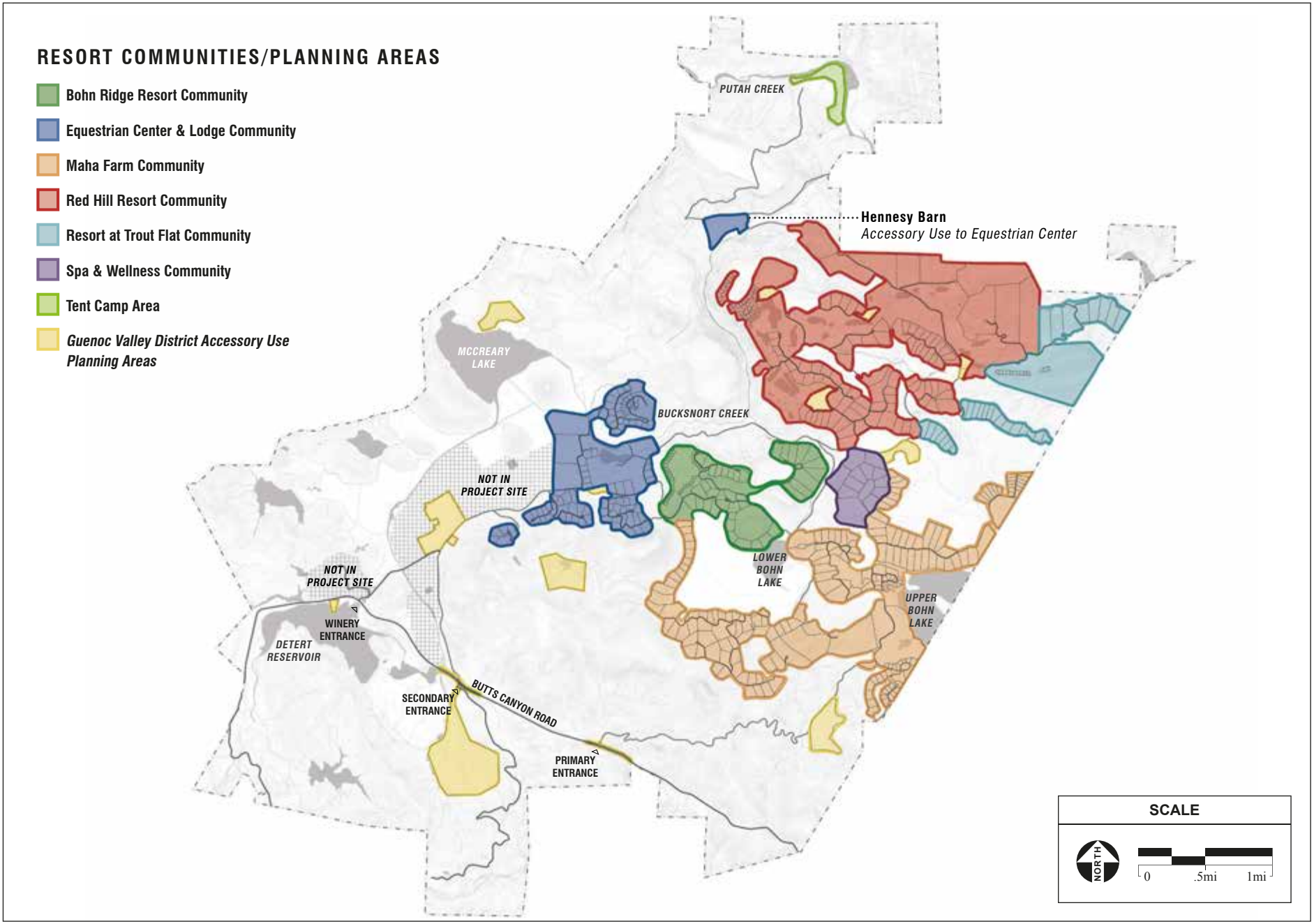
Figure 2
Site and Vicinity

5. Spa Community: This community consists of a few residential parcels, a walking path, and the main spa building.
6. Resort at Trout Flat Community: This community includes residential parcels, resort cottages, and a hotel.
7. Camping Area: This area includes semi-permanent tent structures to provide short-term guests with high-end "glamping" recreational opportunities that are set back from the larger resort communities.

These communities plus supporting infrastructure and workforce housing are included within the Proposed Project. A map outlining the different resort communities within the project site is included in **Figure 3**. Phase 1 of the Proposed Project will result in multiple hotels, resort residential units adjacent to hotels, residential estate villa units, and workforce housing units. Future phases of development are anticipated to include additional hotel units, resort residential units, residential estate units, and additional supporting workforce housing units. Phase 1 and future phases of development will occur within Lake County.

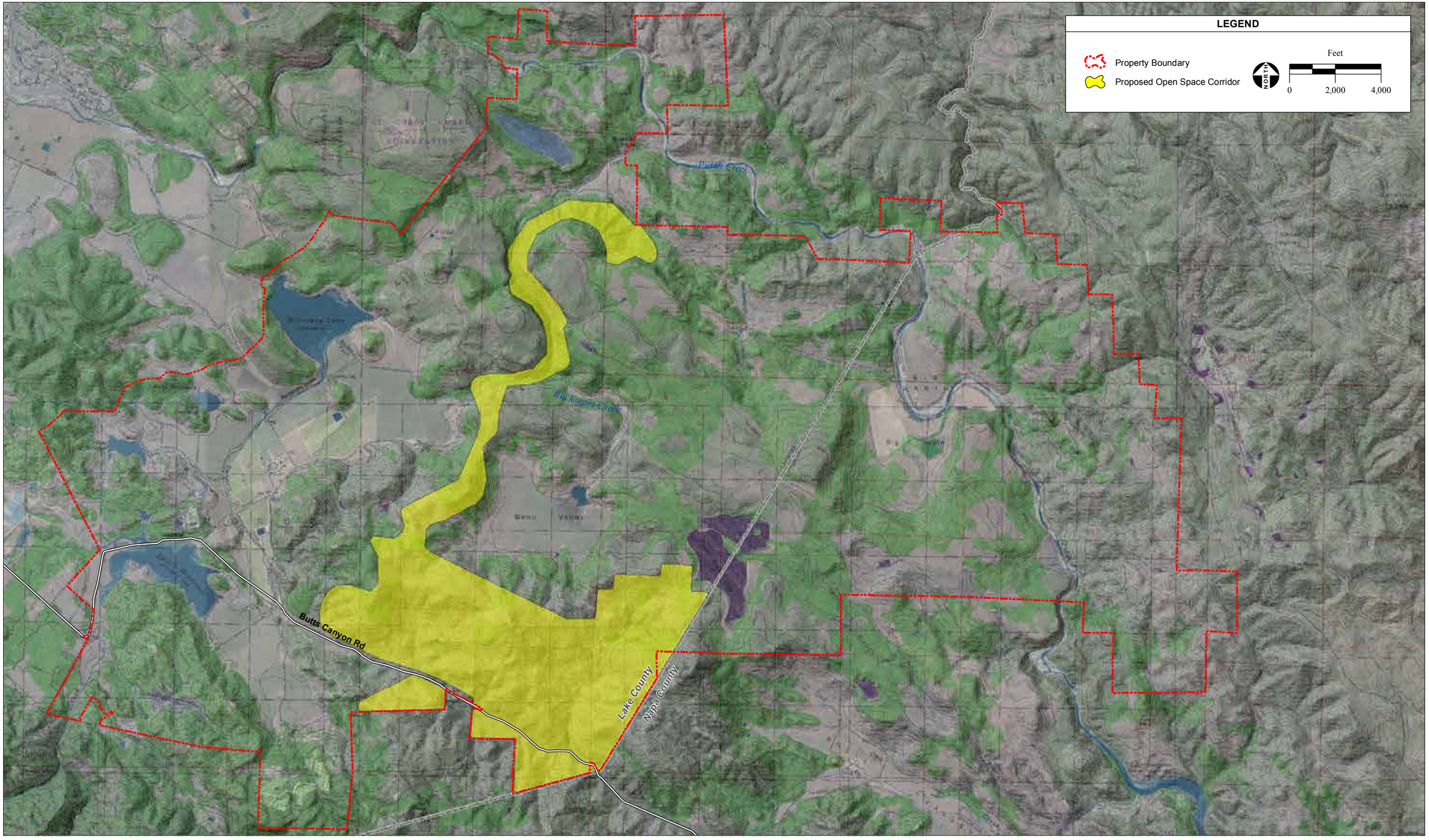
1.3 PROJECT IMPACTS

Open space and contiguous habitat provide important ecological services to plants and wildlife. Dedicated open space allows for plant and animal dispersion, conservation of ecosystem services, and preservation of high-quality habitat. **Table 1** provides a summary of potential project impacts to the existing OSPP area. The existing open space preservation area is outlined in **Figure 4**. Impacts were calculated based on where proposed development areas overlapped with the existing Open Space shown in **Figure 4**.



SOURCE: SWA Group, 10/2019; AES, 11/15/2019

Figure 3
Proposed Project Development Area



SOURCE: Hanson Engineering, 2008; DigitalGlobe aerial photograph, 2007; "Aetna Springs, CA", "Detert Reservoir, CA", "Jericho Valley, CA", "Middletown, CA", USGS 7.5 Minute Topographic Quadrangles
Unsectioned Area "Guenoc"; Sections 2, 3, 4, 5, 6, 7, 8, 9, 10, & 11, T 10N, R 5W; Sections 1, 2, 12, 14, 15, 22, & 23, T 10N, R 6W; Sections 19, 27, 28, 29, 30, 31, 32, 33, 34, & 35, T 11N, R 5W; Sections 24, 25, 26, 35, & 36, T 11N, R 6W; Mt Diablo Baseline and Meridian; AES, 11/18/2019

Figure 4
Existing Open Space Plan

TABLE 1
HABITAT SUMMARY OF OPEN SPACE PRESERVATION AREAS

Habitat Type	Acreage within 2008 OSP	Acreage within proposed OSPP	Change in Acreage
Blue oak savanna	157.11	189.76	32.65
Blue oak woodland	370.49	482.78	112.29
Brewer willow thickets	2.73	2.21	-0.52
California Yerba Santa scrub	3.18	3.17	-0.01
Chamise chaparral	79.05	60.97	-18.08
Deer weed scrub	17.85	17.85	0
Developed	23.68	17.61	-6.07
Foothill pine woodland	581.28	575.67	-5.61
Interior live oak woodland	198.96	181.4	-17.56
Leather oak chaparral	1040.45	886.59	-153.86
Non-native annual grasslands	143.54	202.3	58.76
Purple needlegrass grasslands	0.32	0.32	0
Rock outcrop	6.30	5.84	-0.46
Valley oak woodland	13.44	25.1	11.66
White alder grove	6.75	10.62	3.87
Whiteleaf manzanita chaparral	33.05	2.7	-30.35
Wetlands	32.46	45.79	13.33
Streams	40.66	74.92	34.26
Reservoirs	33.05	1.54	-31.51

1.4 IMPACT MINIMIZATION MEASURES

Because of the ecological and aesthetic significance of open and contiguous habitat, avoidance measures are included where feasible in the project design to minimize impacts to wildlife movement and areas with high densities of sensitive vegetation. These minimization measures include provisions for setbacks along riparian corridors and wetland habitat, buffers around identified special-status plants, maximized avoidance of sensitive habitat types, and construction best management practices. Residential lots will each be subject to biological surveys and a development plan that follows the general outline below:

- Each lot will be evaluated and assigned a maximum 1.5-acre buildable area. This includes restrictions on total lot development areas and/or locations of allowable development within a lot. Lots within oak woodlands will be allowed a reduced 1.0-acre buildable area.
- Through the new GVD zoning ordinance, residential lots will be allowed a maximum development footprint. The remainder of the lot that falls outside of a residential lot's development footprint will be non-dedicated open space. Fencing will be minimized.
- All lots are subject to Landscape Improvement Zones for fire management practices.
- Each lot will be evaluated for impacts to oak trees and will be subject to deed restrictions regarding proper avoidance and/ or mitigation for impacts to oaks. This provision maximizes habitat quality of non-dedicated open space by promoting preservation of valuable oak habitat within each lot.

- These methods will be applied to residential lots developed in any phase of development. In addition to the impact minimization and mindful lot development standards listed above, the following practices will also allow for dedicated areas of open space to occur throughout development.
- For fire management purposes, two-lane roads will be maintained with a buffer from the shoulder of open space subject to vegetation management.
- Resort communities have been clustered to reduce the overall development footprint and increase the amount of non-dedicated open space throughout the Ranch.
- The Proposed Project does not result in the development of land within the Napa County portion of the Ranch.
- Avoidance of natural corridors such as creek setbacks outside of designated open space will be maximized.

Incorporation of the above practices will preserve not only a single large and contiguous core of acreage, but also numerous patches of deed-restricted and undesignated open space scattered throughout the Ranch. These impact minimization measures will be implemented for all phases of development. By doing so, this OSPP amendment provides a significant land dedication through the development in perpetuity, as well as a patchwork of open habitat to further maintain the aesthetics and functionality of the environment. This network of dedications further protects sensitive vegetation, provides additional refugia for wildlife, and provides developmental relief for ecosystem functions such as groundwater recharge.

2.0 EXISTING OPEN SPACE PRESERVATION PLAN

2.1 GOALS AND OBJECTIVES

A map showing the existing open space preservation area on the Ranch is shown in **Figure 4**. The existing Open Space Preservation Plan was designed to prioritize the protection of sensitive biotic communities and habitats for special-status species, establish viable movement corridors for animals and plant dispersal, and promote overall natural biodiversity on the Ranch. General goals of the 2008 OSP and this Amendment are defined by the following metrics:

- Conserve high biodiversity by protecting a diversity of biotic communities and preferentially conserve sensitive biotic communities in the OSPP areas;
- Conserve habitats known or likely to be occupied by threatened and endangered species in OSPP areas;
- Conserve viable wildlife movement areas through terrestrial and riparian corridors across the Ranch, thereby maintaining connections to the regional landscape for the long-term health of OSPP areas;
- Preclude the degradation of the existing natural resources in the designated OSPP areas; and
- Develop site-specific adaptive management plans to monitor and manage significant threats (e.g., detrimental exotic species invasions, illegal dumping) that degrade the habitat quality of the OSPP areas relative to their baseline status.

The 2009 Water Rights EIR resulted in 2,765 acres of mitigated POU within the Ranch. This required a 2,765-acre open space preservation area to be established (**Figure 4**). The open space area was not designed as a functional wildlife corridor, but as a continuous open space that captured portions of existing natural corridors. While the open space area is not defined as a wildlife corridor, its continuity

through the Ranch may allow for wildlife movement through and within the Ranch. **Section 2.3** lists those activities that are permissible within dedicated open space.

2.2 EXISTING OPEN SPACE PRESERVATION LOCATION

At the time of the approval of the 2009 FEIR water rights application, a total of 2,765 acres of potential designated open space were identified in the 2008 OSP (**Figure 4**). Acreage was identified at a 1:1 impact ratio, and bisects the Lake County portion of the Ranch in a net northeasterly direction. The existing open space preservation area was selected based on biological surveys that identified serpentine soils, rare plant communities, riparian habitat, and other biologically significant features within the Ranch.

The existing open space area begins on a large piece of land at the Lake County/Napa County border, directly north and adjacent to Butts Canyon Road. The open space area then runs as a strip of open space northeasterly until reaching Bucksnort Creek. The open space then follows Bucksnort Creek until the northern extent of the property. The majority (94.0 percent) of the existing open space area is retained in the proposed open space area.

2.3 ADAPTIVE MANAGEMENT PROVISIONS

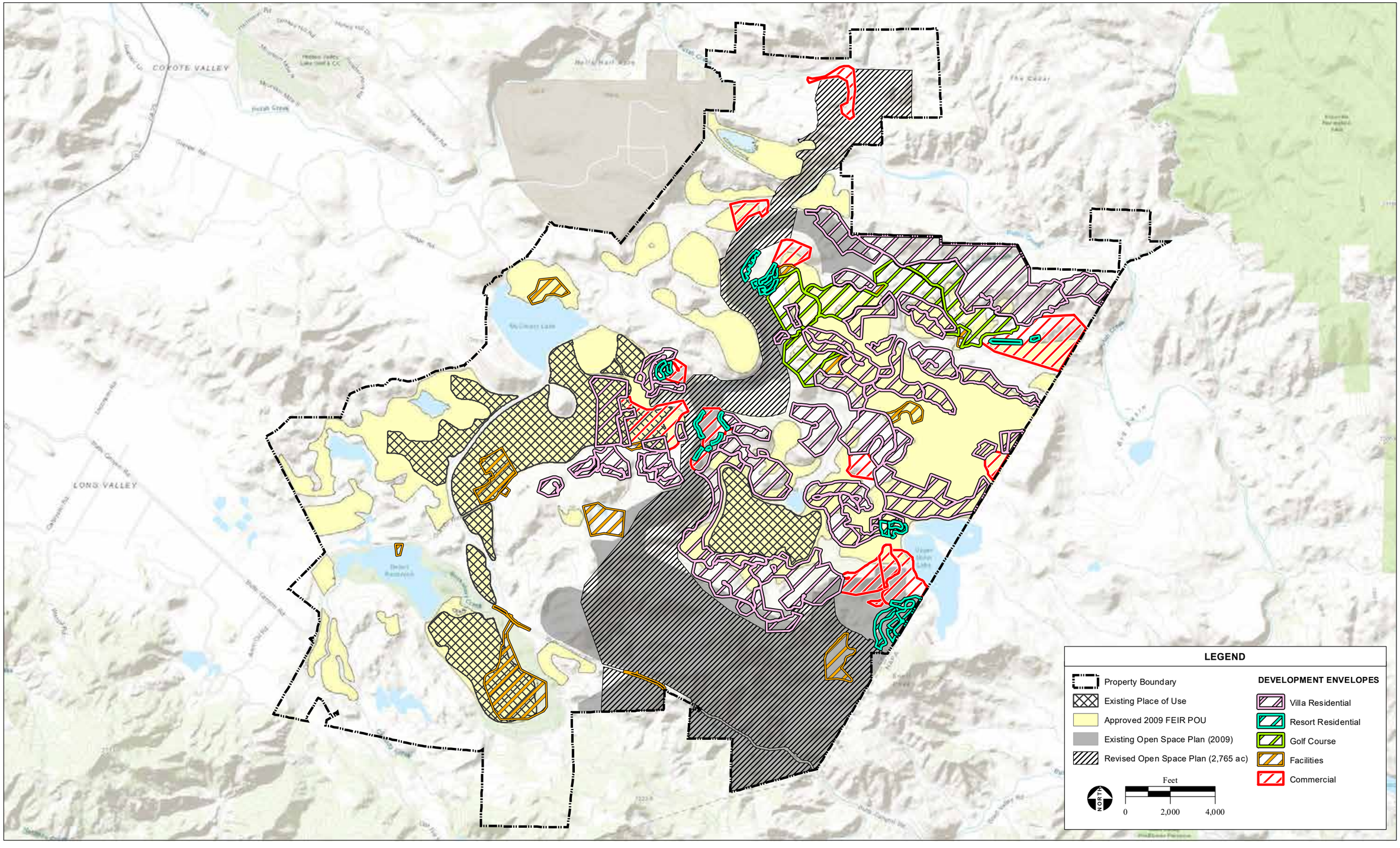
The following approved activities occur under the 2008 OSP and are also considered allowable through this Amendment:

- The maintenance, repair, replacement, expansion, and use of existing groundwater wells and other irrigation improvements within the Open Space Preservation area, and the construction of new water sources, including the drilling of additional wells and the construction or siting of water storage improvements, fixtures, and pipelines for water and utilities;
- The construction, maintenance, repair, and use of roads within the Open Space Preservation area; and
- Ongoing grazing or other currently approved agricultural operations or existing recreational uses including hunting and fishing.

The 2008 OSP and this Amendment additionally allow for modifications of the boundaries presented in **Figure 4** for approved activities on the Ranch, provided that acreage removed from the existing open space be replaced contiguous to the remaining open space at a 1:1 ratio such that the goals and objectives of the 2008 OSP remain fulfilled. Should the EIR for the Proposed Project described in **Section 1.2** be approved, the following outlines a proposed modified open space that retains the required acreage and replaces impacted acreage in compliance with the 2008 OSP.

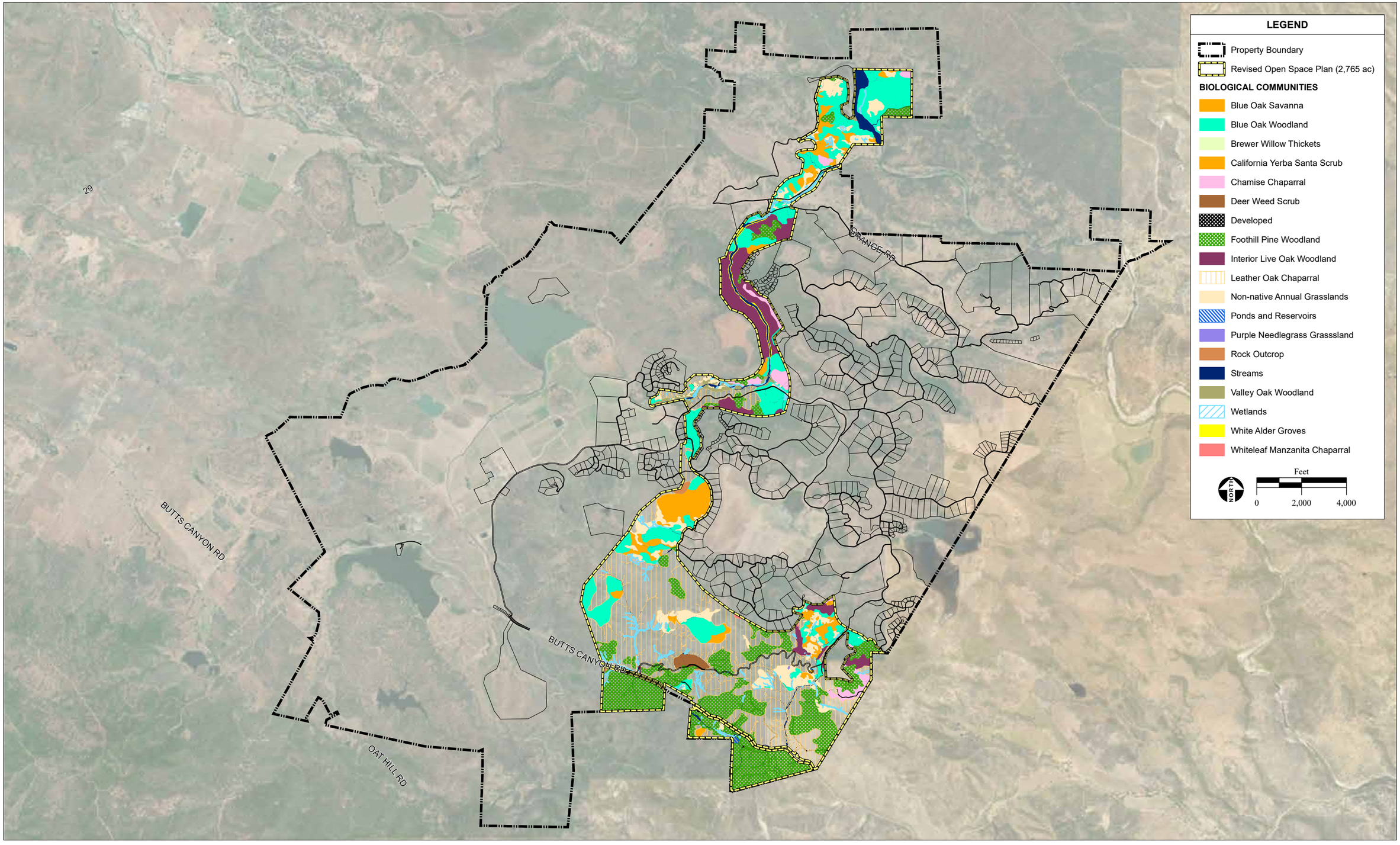
3.0 PROPOSED OPEN SPACE PRESERVATION AMENDMENT

Development of the Proposed Project would impact areas of open space as described in the 2008 OSP (**Table 1**). A map showing the proposed open space preservation area compared with the existing open space preservation area is shown in **Figure 5**. The development area of the Proposed Project and the POU on the Ranch are also included to illustrate those areas not eligible for inclusion within the open space preservation area. A habitat map of those features captured by the proposed open space is included as **Figure 6**. Lot lines of the Proposed Project are included within **Figure 6**. The following outlines the quality and characteristics of habitat selected for preservation as it relates to the OSPP goals.



SOURCE: WRA, Inc., 2009, 2019; AES, 6/4/2020

Figure 5
Revised Open Space Preservation Area



SOURCE: WRA, Inc., 2009, 2019; DigitalGlobe Aerial Photograph, 6/8/2018; AES, 6/4/2020

Figure 6
Habitat Types Within Open Space Preservation Area

3.1 ACREAGE SUBJECT TO REPLACEMENT FROM OPEN SPACE

Development of the Proposed Project would result in the removal habitat from the existing open space area. Removal of open space is the result of conflicts with lot lines; impacts to open space from covered activities such as road construction; and the preferential removal of well-represented habitat within existing open space in exchange for habitat of greater quality, functionality, or of lacking representation within the open space. Residential lots Residential lots range from 2-20 acres with a 1.5 acre maximum building envelop per residential lot, or 1.0 acres for lots within oak woodland. Impacts to the existing Open Space Preservation Area are defined as those areas where lot lines overlap with the existing Open Space Preservation Area. Habitat types present within this impacted and are presented in **Table 2** and consist of brewer willow thicket, California Yerba Santa scrub, chamise chaparral, developed, foothill pine woodland, interior live oak woodland, leather oak chaparral, rock outcrop, whiteleaf manzanita chaparral, and ponds and reservoirs. Removal of these acres does not result in the complete removal of special-status plants, sensitive habitat, or natural corridors included in the original open space plan. Developed habitat (roadways) does not count towards the 2,765 acre requirement.

TABLE 2
HABITAT SUMMARY OF ACREAGE TO BE REMOVED FROM OPEN SPACE

Habitat Type	Acreage Removed from Open Space
Brewer willow thicket	0.52
California Yerba Santa scrub	0.01
Chamise chaparral	18.08
Developed	6.07
Foothill pine woodland	5.61
Interior live oak woodland	17.56
Leather oak chaparral	153.86
Rock outcrop	0.46
Whiteleaf manzanita chaparral	30.35
Ponds and reservoirs	31.51

3.2 ACREAGE SUBJECT TO INCLUSION INTO OPEN SPACE

In order to offset the acres of impacted open space, newly designated open space has been proposed and identified in **Figure 5** and **Figure 6**. Habitat types present within this area are described in **Table 3** and include blue oak savanna, blue oak woodland, non-native annual grasslands, valley oak woodland, white alder grove, wetlands, and streams. Inclusion of this acreage would result in 2,765 acres within the designated open space preservation area.

TABLE 3
HABITAT SUMMARY OF ACREAGE TO BE ADDED IN OPEN SPACE

Habitat Type	Acreage Added to Open Space
Blue oak savanna	32.65
Blue oak woodland	112.29
Non-native annual grasslands	58.76
Valley oak woodland	11.66
White alder grove	3.87
Wetlands	13.33
Streams	34.26

Section 3.2.1 through **Section 3.2.4** describe in detail the qualifying characteristics that make this acreage suitable for inclusion in the OSPP. Habitat was selected to satisfy the goals and requirements outlined in **Section 2.1**. A large portion of the inclusion runs along the northeastern extent of Bucksnort Creek, a perennial stream that is a tributary to Putah Creek. The secondary inclusion of habitat into the open space plan widens and smooths the strips of land that connect the southern extent of open space up to Bucksnort Creek and other stretches along Bucksnort Creek where additional surveys have revealed sensitive habitat or special-status plants. **Figure 7** shows representative site photographs of the open space preservation area.

Preservation of Contiguous Core Habitat

The main goal of this OSPP amendment is to set aside a core of connected habitat that provides environmental benefits such as plant and wildlife dispersal and refugia. The 2008 OSP defines this large block of habitat as a "core" that protects dispersal and interactions between species from the disturbances of potential development. While the open space is not by definition a wildlife corridor and is not intended to function as such, it does provide a continuous passageway through the development.

The proposed acreage of open space preservation includes the portion of Bucksnort Creek and associated habitat from the existing open space plan through to the northern property boundary. The original OSPP included much of Bucksnort Creek due to the dispersal value offered by riparian passageways, but did not include this natural corridor to its fullest extent (**Figure 4**). By incorporating additional portions of Bucksnort Creek, the modified open space provides a more complete and continuous corridor that captures the full value of this natural passageway. Additional benefits of this core preservation include increased opportunity for species recovery, an undisturbed scenic vista, and ecosystem functions such as groundwater recharge that require larger areas of dedicated undisturbed space.

PHOTO 1: Representative photo of valley oak woodland to be preserved in the Open Space.

PHOTO 2: Riparian corridor along Bucksnort Creek.

PHOTO 3: Narrow-anthered brodiaea (CNPS Rank 1B.2) within open space.

PHOTO 4: Greene's narrow-leaved daisy (CNPS Rank 1B.2) within open space.

SOURCE: AES, 11/19/19

Figure 7
Representative Open Space Photos

Conservation of Special-Status Plants

Acreage proposed for inclusion in the open space preservation area targets known locations of special-status plants identified in the 2009 EIR, as well as from biological surveys conducted since the approval of the 2008 OSP (WRA, 2019a; WRA, 2019b; WRA, 2019c). Information provided by recent biological surveys has allowed for greater inclusion of special-status plants within the OSPP. A total of nine special-status plants have been observed on the Ranch: Colusa layia *(Layia septentrionalis*), Green jewelflower (*Streptanthus hesperidis*), Greene's narrow-leaved daisy (*Erigeron greenei*), Keck's checkerbloom (*Sidalcea keckii*), Konocti Manzanita (*Arctostaphylos manzanita ssp. elegans*), Lake County western flax (*Hesperolinon didymocarpum*), Narrow-anthered brodiaea (*Brodiaea leptandra*), Three peaks jewelflower (*Streptanthus morrisonii ssp. elatus*), and Two carpellate western flax (*Hesperolinon bicarpellatum*).

The proposed boundaries of the open space preservation area includes representation of seven special-status plant species that have been identified on the Ranch. Of these plants, one was not included in the original open space preservation area: federally endangered Keck's checkerbloom. **Table 4** outlines special-status plants that occur within the existing and proposed open space preservation area. In addition to the inclusion of additional special-status plants, the proposed open space preservation area expands the overall acreage of known special-status plant locations included within open space. Those special-status plants not included within proposed open space occur on a portion of the Ranch offset from the Proposed Project and the existing open space preservation area.

TABLE 4
SPECIAL STATUS PLANTS WITHIN OPEN SPACE MODIFICATION

Special Status Plant	Status	Presence within 2008 OSP	Presence within Proposed OSPP
Colusa layia	CNPS 1B.2	Yes	Yes
Green jewelflower	CNPS 1B.2	Yes	Yes
Greene's narrow-leaved daisy	CNPS 1B.2	Yes	Yes
Keck's checkerbloom	Federal Endangered, CNPS 1B.1	No	Yes
Konocti Manzanita	CNPS 1B.3	No	No
Lake County western flax	State Endangered, CNPS 1B.2	Yes	Yes
Narrow-anthered brodiaea	CNPS 1B.2	Yes	Yes
Three peaks jewelflower	CNPS 1B.2	No	No
Two carpellate western flax	CNPS 1B.2	Yes	Yes

CNPS Rank 1B – Plants Rare, Threatened, or Endangered in California and Elsewhere
CNPS Rank 2B – Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

Threat Rank 0.1 – Seriously Threatened in California
Threat Rank 0.2 – Fairly Threatened in California
Threat Rank 0.3 – Not Very Threatened in California

Preservation of Sensitive Habitat

Habitats that are considered sensitive are also considered priority preservation areas in the 2008 OSP. In the proposed open space preservation area, special attention was given to the nearby sensitive habitats that were not included in the original open space area. The proposed open space preservation area includes a significant increase in valley oak woodland inclusion. Valley oak woodland is a CNPS state rank "vulnerable" vegetation alliance and CDFW state rank "Vulnerable-Sensitive." The Ranch contains areas of valley oaks that are long-lived and mature, therefore, this habitat is considered a priority for preservation.

Adjacent high-quality habitat suitable for valley and other oak planting is included in the proposed open space to provide suitable habitat restoration areas should individual oak trees be impacted elsewhere on the Ranch. Oak woodlands within the open space preservation area may also be considered oak woodland preservation areas for the sake of mitigating for the Proposed Project's impacts to oaks. This provides additional assurances that those oak woodland areas are preserved in perpetuity. Inclusions to the open space preservation area include sensitive habitat types such as those with serpentine soils, rare plant areas, and riparian corridors. This includes an increase in represented wetlands and stream habitat, as well as associated riparian vegetation such as white alder groves.

Inclusion of High-quality Habitat

Protection of high-quality habitat increases biodiversity and improves ecosystem stability through a native, undisturbed environment. Biological surveys around Bucksnort Creek and other areas proposed for inclusion into open space have identified active nests, special-status plants and animals, and potential habitat for additional species not observed during surveys (WRA, 2019a; WRA, 2019b; WRA, 2019c). Addition of these areas maximizes the environmental and aesthetic benefits of the open space preservation area.

In addition to those areas already recognized as high-quality habitat, areas of adjacent habitat lacking sensitive vegetation or special-status plants have been included for the purposed of habitat restoration. The Proposed Project will require mitigation for impacts to sensitive habitat types and special-status plants. Habitat included within the open space preservation area represents an ideal location for habitat restoration efforts. This is due to the assurance of preservation within the open space, and the opportunity to increase the overall continuity and functionality of previously identified high-quality habitat.

4.0 OPEN SPACE AREA MAINTENANCE AND MONITORING

While the majority of the open space preservation area would remain largely undisturbed, specific maintenance activities are permitted to occur within the open space area beyond approved activities outlined in **Section 2.3**, including habitat restoration and mitigation and monitoring actions related to the Proposed Project. Fire damage incurred on the Ranch in the Valley Fire of 2015 emphasized the need to monitor and maintain vegetation against a changing fire regime. It is anticipated that grazing will be utilized, as included under the 2008 OSP and this OSPP amendment. No specific maintenance or monitoring activities are required through this amendment.

5.0 ASSURANCE OF OPEN SPACE PRESERVATION

This document provides assurances that the designated open space as described here within shall be preserved in perpetuity. This OSPP shall be filed with the California Water Resources Board, as proof of

the changes made to the OSP included in the 2009 Water Right EIR. This OSPP will also be submitted to Lake County for approval. Approval of this document and maps presented herein shall serve as a binding agreement between the Ranch and Lake County.

Any future impacts for approved activities within the designated open space will be subject to additional mitigation in the form of preservation of acreage at a 1:1 ratio to impacts such that the goals outlined in this Amendment are still achieved, and only with Lake County approval.

6.0 REFERENCES

Analytical Environmental Services (AES), 2008. Langtry Farms Water Rights Modification Open Space Preservation Plan.

Analytical Environmental Services (AES), 2009. Guenoc Water Rights Modification Project Final Environmental Impact Report.

Lake County, 2008. Lake County General Plan. Available online at: http://www.co.lake.ca.us/-Page3939.aspx. Accessed June 2019.

MAHA Developments, 2019. Specific Plan of Development (SPOD) for the MAHA resort at Guenoc Valley.

Western Regional Climate Center (WRCC), 2016. Middletown, CA: Period of Record Monthly Climate Summary. Available online at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5598. Accessed June 2019.

WRA, Inc. (WRA), 2020a. Biological Resources Assessment for MAHA Resort and Guenoc Valley Development, Phase 1 Lake County, California.

WRA, Inc. (WRA), 2020b. Biological Resources Assessment for MAHA Resort and Guenoc Valley Development, Phase 2 and Open Space Lake County, California.

WRA, Inc. (WRA), 2020c. Aquatic Resources Delineation Report for MAHA Resort and Guenoc Valley Development, Phase 1 Lake County, California.

REVISED APPENDIX SPOD

SPECIFIC PLAN OF DEVELOPMENT FOR PHASE

MAHÁ

GUENOC VALLEY

SPECIFIC PLAN OF DEVELOPMENT

FOR THE MAHA RESORT AT GUENOC VALLEY

PREPARED FOR THE COUNTY OF LAKE COMMUNITY DEVELOPMENT DEPARTMENT

ORIGINAL SUBMISSION : JUNE 1, 2019
MINOR REVISIONS : NOVEMBER 1, 2019 & JUNE 1, 2020

TABLE OF CONTENTS

JUNE 1, 2020 UPDATES ***4***
NOVEMBER 1, 2019 UPDATES ***5***

SECTION 1 INTRODUCTION **6**
Site Context 7
Project History 9
Approval Process & Entitlements 10
Executive Summary 11
Community Benefits 12
Sustainability Efforts 13
Low Impact Development 14
Resort Communities 15
Project Site Plan 16
Environmental Review 17

SECTION 2 LANDSCAPE **18**
Guenoc Valley Landscape 19
Landscape Zones 23
Agriculture 28
Grazing Activities 33
Landscape Fire Plan 36

SECTION 3 ARCHITECTURE AND LAND USE PLANS **41**
Maha Farm | Backen & Gillam Architects 43
Equestrian Center | Figueras Design Group 59
Denniston Golf Estates | Denniston International 65
Renaissance Golf Course | Tom Doak 70
Bohn Ridge Resort | Design Realization 74
Resort at Trout Flat | Kerry Hill Architects 78
Spa | Bunnag Architects 82
Tented Camp Area | Jan Kortland 86
Supporting Facilities | Verse Design LA 90
Workforce Housing | Verse Design LA 91
Emergency Center & Short Term Stay | Verse Design LA 94
Central Back of House Operations | Verse Design LA 96
Aerial Site Access | Verse Design LA 99

SECTION 4 SUBDIVISION PLANS **101**

SECTION 5 UTILITIES & INFRASTRUCTURE **110**
Phasing 111
Circulation 112
Water 117
Wastewater 123
Stormwater 130
Watersheds 134
Grading & Drainage 135
Dry Utilities 140
Communication 145

SECTION 6 PUBLIC STREETSCAPE **146**
Signage & Wayfinding 148
Fencing 158

JUNE 1, 2020 UPDATES

Please note that the Specific Plan of Development (SPOD) outlines land-use intensity and density. The following pages include lot layouts, roads, and infrastructure that may change in response to the environmental review process: 12–16, 23, 29, 31, 32, 35, 37–40, 42, 44–46, 48, 51–58, 60–63, 66–68, 71, 72, 75, 76, 79, 80, 83, 84, 87, 88, 90, 92, 94, 98, 100, 103–109, 113–115, 117–121, 123–127, 134–139, 141–145, 148, and 158.

Please refer to the Tentative Subdivision Maps for the final lot layouts, roads, and infrastructure.

The following pages were updated from both the original June 2019 submission and the October 2019 Change Memo submission as part of the June 2020 Change Memo submission:

- **PG 31 – FARMING ACTIVITIES AT MAHA FARM**
- **PG 32 – FARMING ACTIVITIES** FARM BARN LAND USE FLOOR PLANS
- **PG 42 – ARCHITECTURE AND LAND USE PLANS**
- **PG 44 – MAHA FARM** LAND USE CLUSTER MAP
- **PG 45 – MAHA FARM** DETAILED CLUSTER MAP
- **PG 46 – MAHA FARM** MAHA FARM VILLAGE [A] LAND USE FLOOR PLANS
- **PG 48 – MAHA FARM** MAHA FARM HOTEL [B] LAND USE FLOOR PLANS
- **PG 51 – MAHA FARM** SALES CENTER AT THE HILLTOP LODGE [C] LAND USE FLOOR PLANS
- **PG 52 – MAHA FARM** WINERY AT MAHA FARM [D] LAND USE FLOOR PLANS
- **PG 53 – MAHA FARM** MAHA FARM RESIDENTS CLUB LAND USE FLOOR PLANS
- **PG 54 – MAHA FARM** MAHA FARM SPECIAL EVENTS [E] LAND USE FLOOR PLANS
- **PG 55 – MAHA FARM** RESORT RESIDENTIAL SOUTH LAND USE FLOOR PLANS
- **PG 56 – MAHA FARM** RESORT RESIDENTIAL NORTH LAND USE FLOOR PLANS
- **PG 58 – MAHA FARM** MAHA FARM GARDEN LAND USE FLOOR PLANS
- **PG 65 – DENNISTON GOLF ESTATES**
- **PG 66 – DENNISTON GOLF ESTATES** LAND USE CLUSTER MAP
- **PG 67 – DENNISTON GOLF ESTATES** HOTEL ENTRY LEVEL LAND USE FLOOR PLAN
- **PG 68 – DENNISTON GOLF ESTATES** HOTEL LOWER LEVEL LAND USE PLAN
- **PG 69 – DENNISTON GOLF ESTATES** HOTEL ELEVATION
- **PG 71 – RENAISSANCE GOLF COURSE** CLUBHOUSE LAND USE FLOOR PLANS
- **PG 72 – RENAISSANCE GOLF COURSE** CLUBHOUSE AND MAINTENANCE LAND USE FLOOR PLANS
- **PG 73 – RENAISSANCE GOLF COURSE ESTATES** ELEVATIONS

NOVEMBER 1, 2019 UPDATES

Please refer to the Tentative Subdivision Maps for the final lot layouts, roads, and infrastructure.

The following pages were updated from the June 2019 submission as part of the October 2019 Change Memo submission:

- **PG 57 – MAHA FARM** ESTATE WINERY LAND USE FLOOR PLANS
- **PG 94 – EMERGENCY CENTER & SHORT TERM STAY** LAND USE FLOOR PLAN
- **PG 95 – EMERGENCY CENTER & SHORT TERM STAY** ELEVATIONS

Please note that certain pages updated November 1, 2019 following the October 2019 Change Memo have been superseded by the June 1, 2020 Change Memo.

SECTION 1 INTRODUCTION

SECTION 1 INTRODUCTION

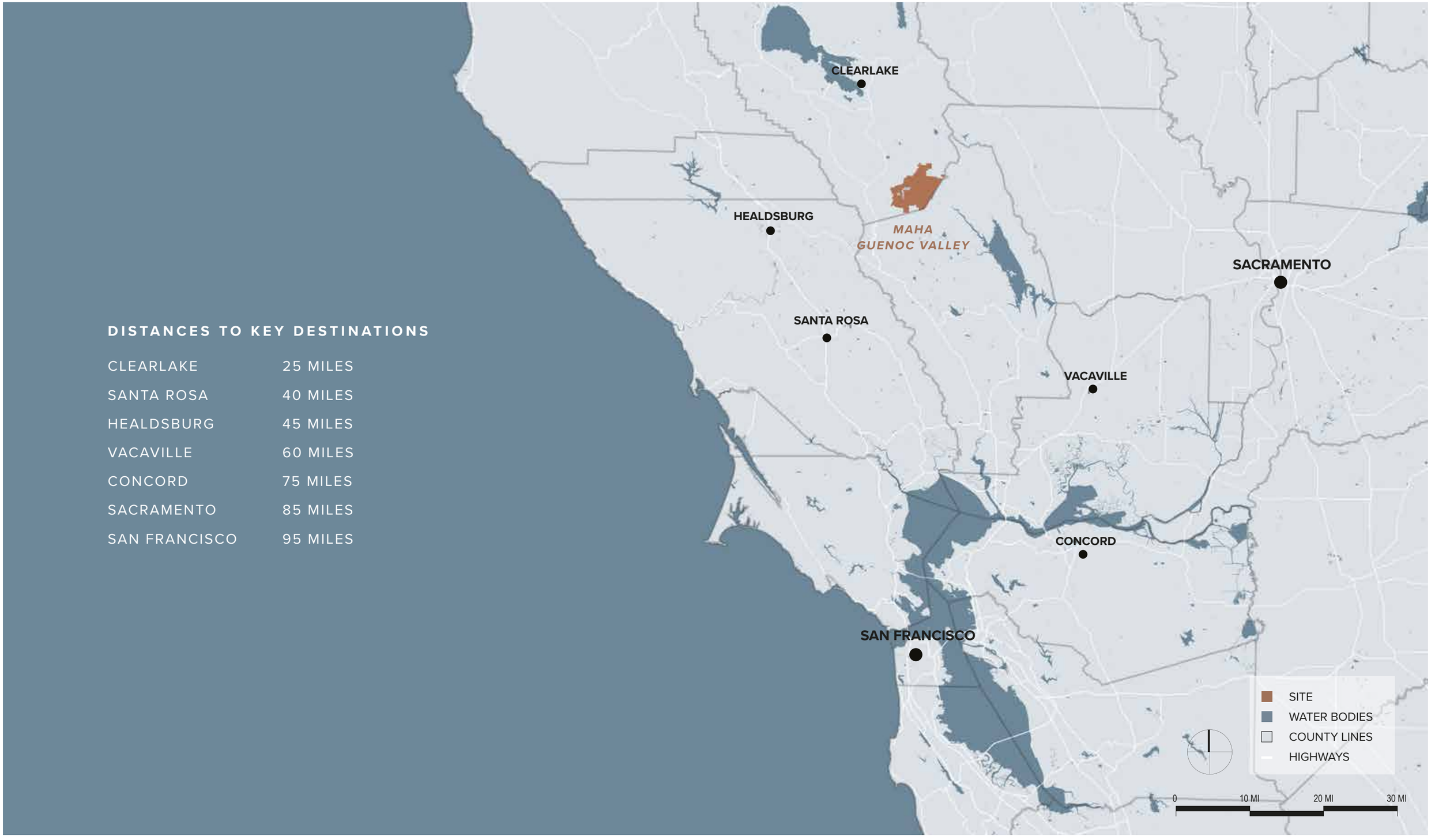
SITE CONTEXT

The main project site, currently consisting of 49 assessor's parcels totaling approximately 16,000 acres within Guenoc Valley, is located three miles southeast of Middletown on the southeast border of Lake County, bordering Yolo and Napa Counties to the south and east, with primary access along Butts Canyon Road. The Guenoc Ranch remains one of the largest privately owned properties in the state of California. It is bordered by Hidden Valley Lake community, to the northwest, which is undergoing continued development.

Guenoc Valley is a small inland valley set on an alluvial fan, isolated from surrounding areas by rocky ridges and volcanic rock. As part of the inner coastal range of Northern California, the site is characterized by uniquely varied topography, with rolling hills, oak woodlands, irrigated vineyards, grazing corridors, open space, and meadows. Ground elevation ranges from 62 to 950 feet above sea level. The average rainfall is 35 inches a year, slightly less than neighboring Middletown, with slightly greater seasonal temperatures, and generally less severe fog.

An existing loop road currently provides access from Guenoc Road, which intersects Butts Canyon Road across from the Detert Reservoir. The project anticipates continued utilization of the existing loop road, with a new intersection to be located approximately just over one mile from the existing intersection to the Langtry Winery.

PROJECT SITE LOCATION



DISTANCES TO KEY DESTINATIONS

CLEARLAKE	25 MILES
SANTA ROSA	40 MILES
HEALDSBURG	45 MILES
VACAVILLE	60 MILES
CONCORD	75 MILES
SACRAMENTO	85 MILES
SAN FRANCISCO	95 MILES

PROJECT BACKGROUND

Current ownership, under the management of Lotusland Investment Holdings, Inc., has approached the County of Lake with a development proposal in alignment with the objectives of the Middletown Area Plan Special Study Area. The intention of the developers is to transform the property into a twenty-first century rural idyll, combining state-of-the-art hospitality and recreational facilities set in the timeless beauty of the land. The vision of the Maha Resort at Guenoc Valley is a destination resort of unparalleled luxury, featuring internationally acclaimed architect-designed boutique hotels with products and amenities from local artisans and farms, providing a luxurious experience within the scope of a master-planned mixed-use development.

Maha reflects the area's local stewardship, historic retreat culture and longstanding agricultural traditions. The proposed development features low-impact development as well as smart growth techniques in order to preserve the legacy and identity of the ranch for future generations. The master plan will incorporate land management practices that support open space preservation with an integrative animal husbandry element along with fuel reduction management.

To fulfill our vision of a world-renowned brand offering a luxurious experience in an iconic natural setting, the project demands uncompromising excellence in all regards. This extends into planning, plans for construction, operations and maintenance, as presented in the following submittals for your review.

LAKE COUNTY APPROVAL PROCESS

The project is entirely within the jurisdiction of the County of Lake. The approval process includes an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA).

The project requests the following entitlements: 1) General Plan Amendment; 2) adoption of a new zoning classification: Guenoc Valley Mixed Use Planned Development District (GVD); 3) Use Permit to allow a Specific Plan of Development (SPOD); 4) General Plan of Development; 5) Development Agreement, and 6) Tentative Subdivision Maps.

EXISTING LAND USE POLICIES & PROPOSED ENTITLEMENTS

The project adheres to the framework of the existing Lake County land use policies and goals as defined by the General Plan and it also meets the objectives of the specific plan for this area as defined by the Middletown Area Plan. As directed by the Area Plan, the Guenoc Ranch will be rezoned to accommodate planned resort development. The planned development will be designed as mixed-use, comprising resort, resort commercial, residential, and agriculture as previously anticipated in the Area Plan.

The approval process for the proposed entitlements includes multiple public meetings and hearings before the Planning Commission before seeking ultimate approval by the Board of Supervisors. The new zoning designation, Guenoc Valley District (GVD), includes proposed development standards outlined in the draft zoning ordinance section. These are consistent with the County's existing Commercial and Residential Planned Development zoning designations as requested by the Area Plan. The proposed entitlements utilize the Planned Development process for the long term growth of the Maha Resort at Guenoc Valley. This recognizes efficient land utilization and preservation of open space in conjunction with fire-safe measures already required by the County Fire Safe Regulations. It also includes additional measures that Maha Resort proposes in the Emergency Action and Fire Management Plan.

Currently, the Property is zoned Agricultural and Rural Lands. The Middletown Area Plan, which furthers the intentions of the General Plan, highlights this district as an appropriate site for a mixed-use planned development. To bring the property into conformity with the mixed-use resort-centric development of the Middletown Area Plan, and by extension the General Plan, a rezoning is required. The County currently has three zoning designations allowing mixed-use development: Commercial Resort, Planned Development Residential, and Planned Development Commercial. Due to the intermingling of resort, commercial, and residential uses; no single existing zoning designation is appropriate for the property. Therefore, GVD is a blend of all three zoning practices.

EXECUTIVE SUMMARY

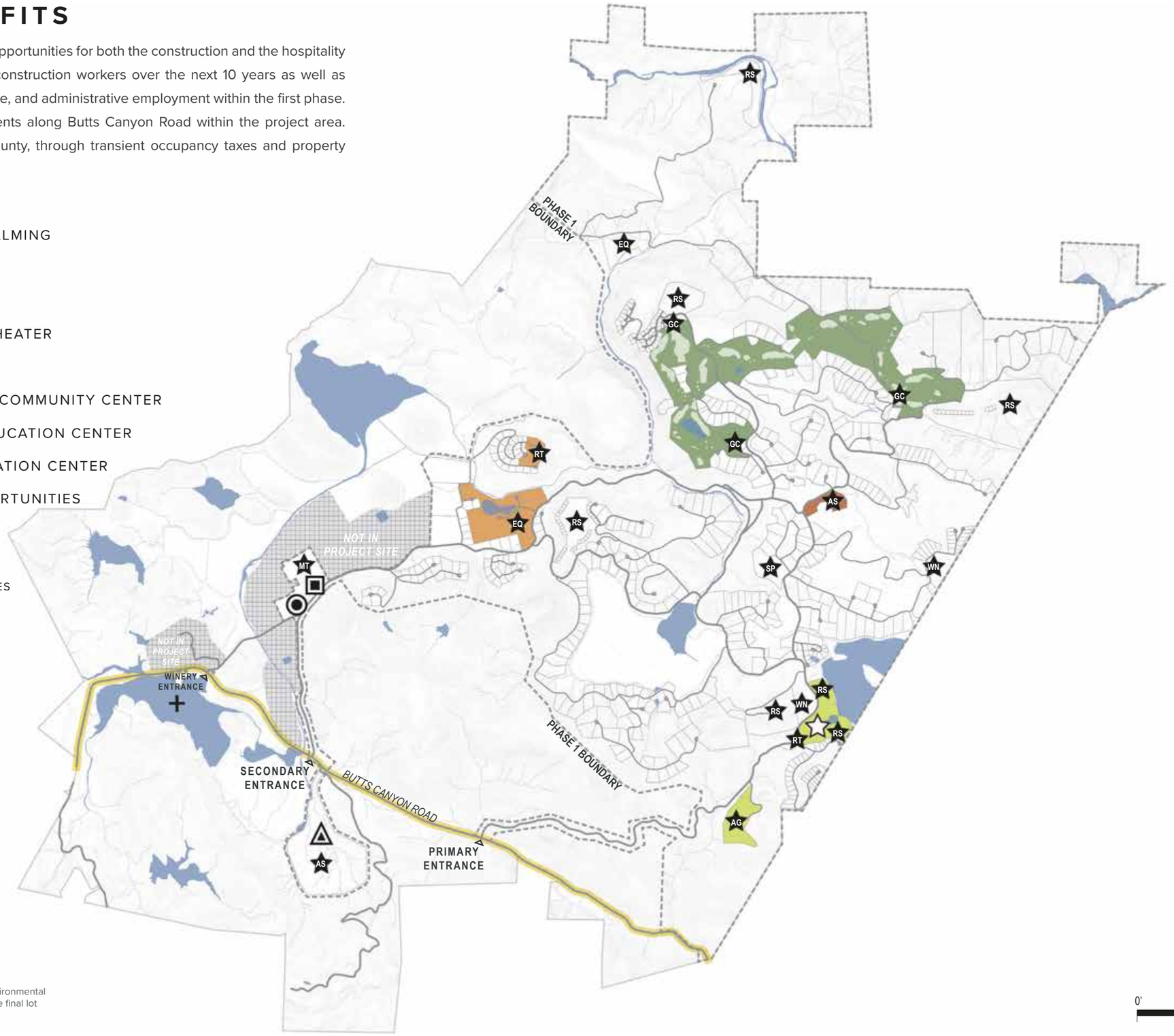
This Specific Plan of Development details the first and primary phase of the Maha Resort at Guenoc Valley. Inspired by the landscape and heritage of this extraordinary property the proposal incorporates low impact sustainable development and smart growth techniques with a commitment to preserving the legacy and identity of the ranch for future generations. The project is organized into individual resort communities, defined by low impact designs that prioritize low density and clustered development, preserving surrounding open space and agricultural cultivation. These resort communities are situated within the natural landscapes to minimize construction impacts and connect guests seamlessly with the land. The project proposes diversified agricultural production to include gardens, culinary education, farmers markets, and agricultural retail sales and opportunities for local artisans and business. The vision of the Maha Resort champions the commitment to on-site production and self-reliance as a pillar of its excellence in design, impact, and narrative as evident in the sustainability efforts and community benefits.

COMMUNITY BENEFITS

This project provides employment training and opportunities for both the construction and the hospitality industries. It anticipates relying on over 500 construction workers over the next 10 years as well as 300, year round, full time hospitality, maintenance, and administrative employment within the first phase. The project will also result in traffic improvements along Butts Canyon Road within the project area. Furthermore, increased tax revenue for the County, through transient occupancy taxes and property taxes, will directly benefit the community.

- AERIAL TRANSPORTATION ACCESS
- BUTTS CANYON ROAD TRAFFIC CALMING
- EMERGENCY RESPONSE CENTER
- EQUESTRIAN CENTER
- FARMER'S MARKET & OUTDOOR THEATER
- GOLF COURSE
- ON-SITE WORKFORCE HOUSING & COMMUNITY CENTER
- CONSTRUCTION EMPLOYMENT EDUCATION CENTER
- HOSPITALITY EMPLOYMENT EDUCATION CENTER
- LOCAL ARTISAN & SUPPLIER OPPORTUNITIES
  SUPPORTING LOCAL BUSINESSES
- EMPLOYMENT OPPORTUNITIES

AG AGRICULTURE
AS ADMINISTRATION & SUPPORT SERVICES
EQ EQUESTRIAN
GC GOLF COURSE
MT MAINTENANCE
RS RESORT
RT RESTAURANT
WN WINERY
SP SPA

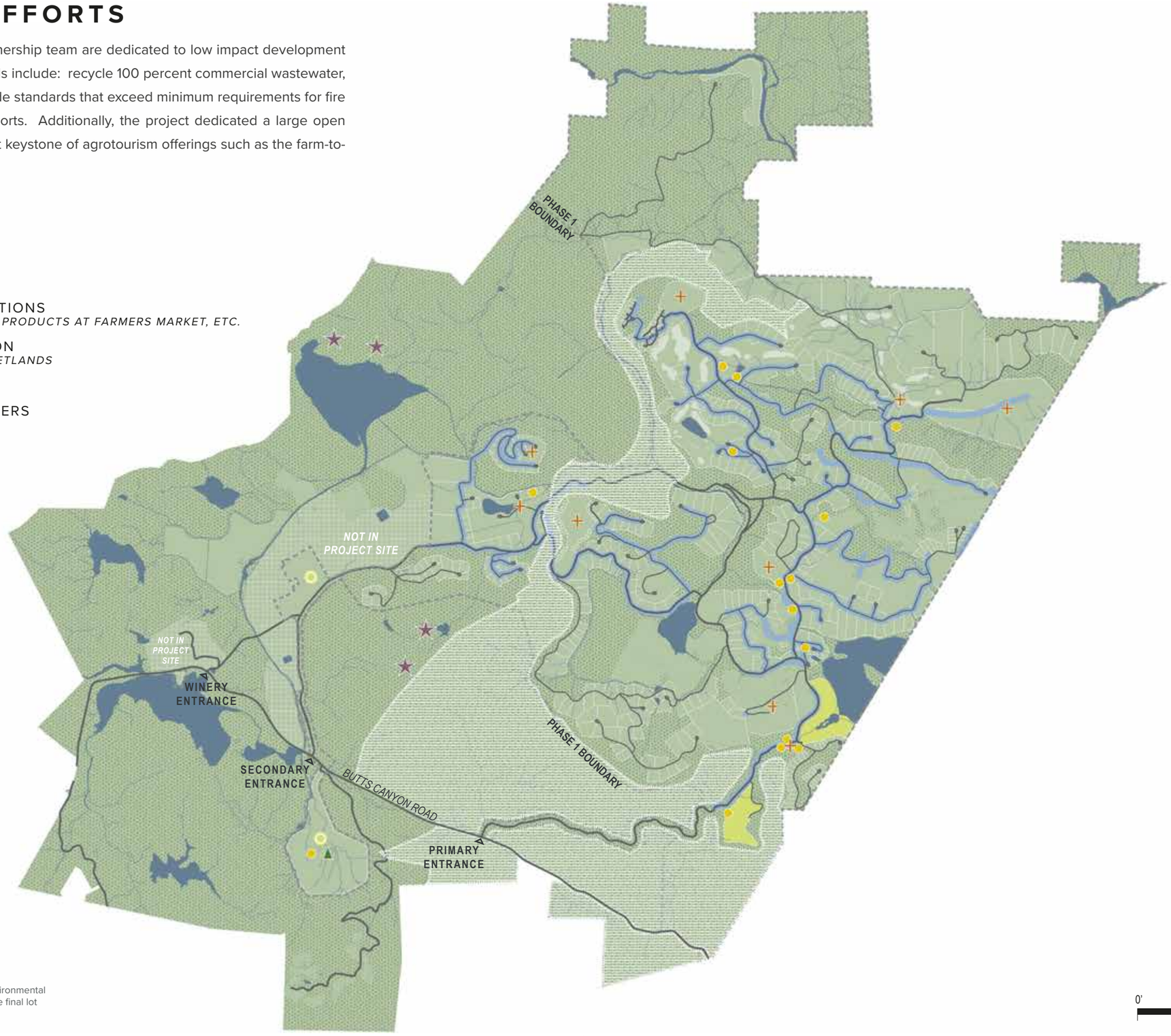


NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

SUSTAINABILITY EFFORTS

The Maha Guenoc Valley development and ownership team are dedicated to low impact development existing with the natural landscape. Project goals include: recycle 100 percent commercial wastewater, zero net electrical energy, propose building code standards that exceed minimum requirements for fire resiliency, installation of electric car charging ports. Additionally, the project dedicated a large open space area, native plant nursery, and the project keystone of agrotourism offerings such as the farm-to-table experience.

- DEDICATED OPEN SPACE
  NO DEVELOPMENT ALLOWED
- FIRE RESILIENT LANDSCAPE
- GRAZING & ANIMAL HUSBANDRY
- DIVERSIFIED AGRICULTURE OPERATIONS
  GARDENS, ORCHARDS, LOCALLY SOURCED PRODUCTS AT FARMERS MARKET, ETC.
- RIPARIAN & WETLAND RESTORATION
  LAKES, PONDS, CREEKS, STREAMS, AND WETLANDS
- RECYCLED WATER DISTRIBUTION
- WASTEWATER RECLAMATION CENTERS
- COMPOST & RECYCLING CENTERS
- EV CHARGING STATIONS
- SOLAR FIELDS
  TOTAL: 40 ACRES
  RESULT: ZERO NET ELECTRIC ENERGY
- NATIVE NURSERY



0' 1800' 3600' 7200'

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

LOW-IMPACT DESIGN

Each resort community will include a mixture of hotel Units, Resort Residential, and Residential Villas. The clustering of development reduces the sprawl of the development and results in consolidated hubs for the guest to enjoy while preserving the rural landscape and agricultural qualities of the Property. Both the Resort Residential and the Residential Villas are intended for subdivision. This results in a very low density, an average of 0.1 unit per acre, with the average lot size of 5 acres with portions of each lot in conservation, which is similar to surrounding rural residential context. Roadways and typical buildings are accurately scaled in the site plan below to demonstrate the low-impact design.

RESIDENTIAL UNITS PER ACRE IN RESORT COMMUNITIES

0.18 BOHN RIDGE RESORT COMMUNITY

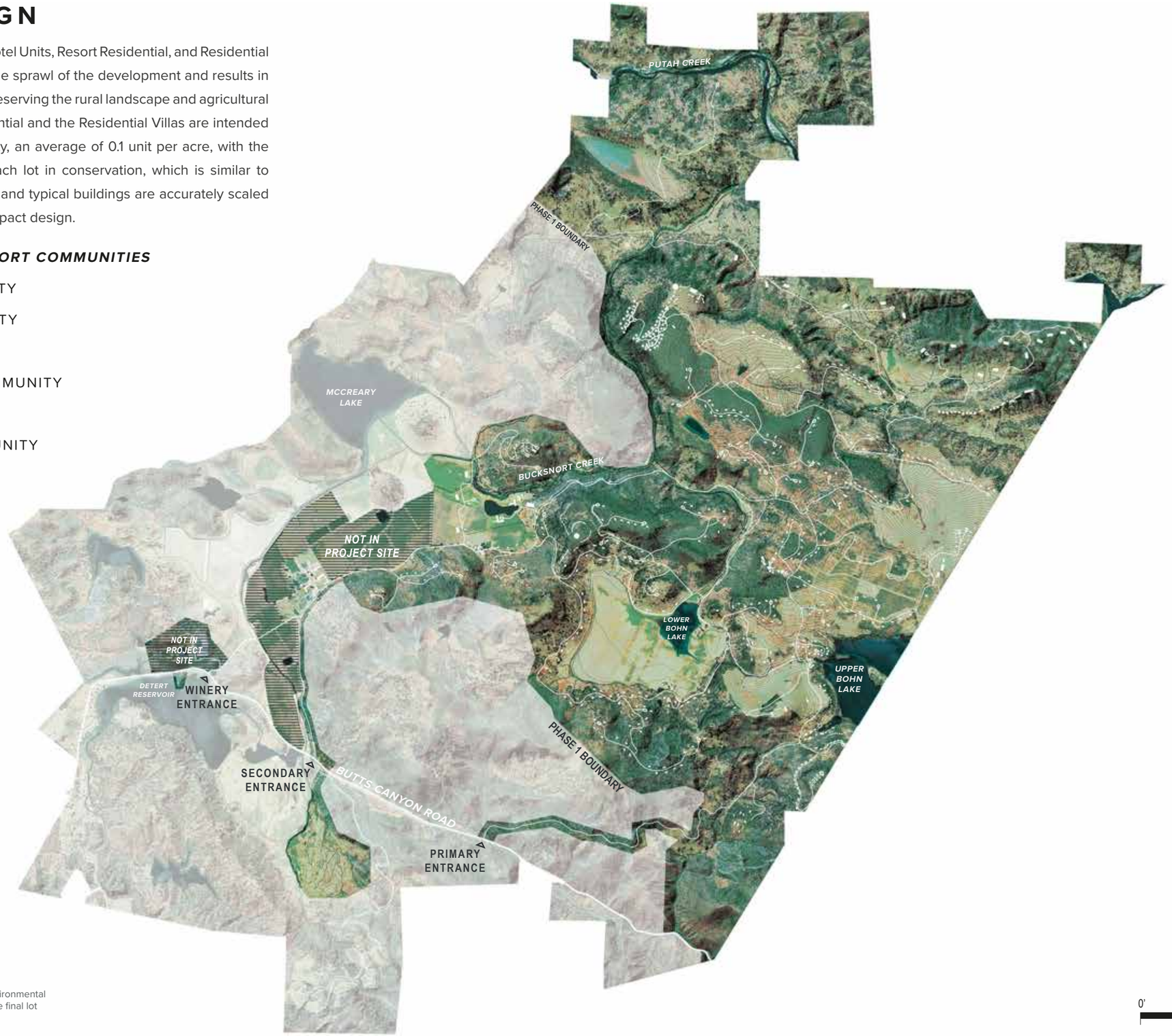
0.14 EQUESTRIAN CENTER COMMUNITY

0.12 MAHA FARM COMMUNITY

0.18 DENNISTON GOLF ESTATES COMMUNITY

0.12 SPA COMMUNITY

0.03 RESORT AT TROUT FLAT COMMUNITY

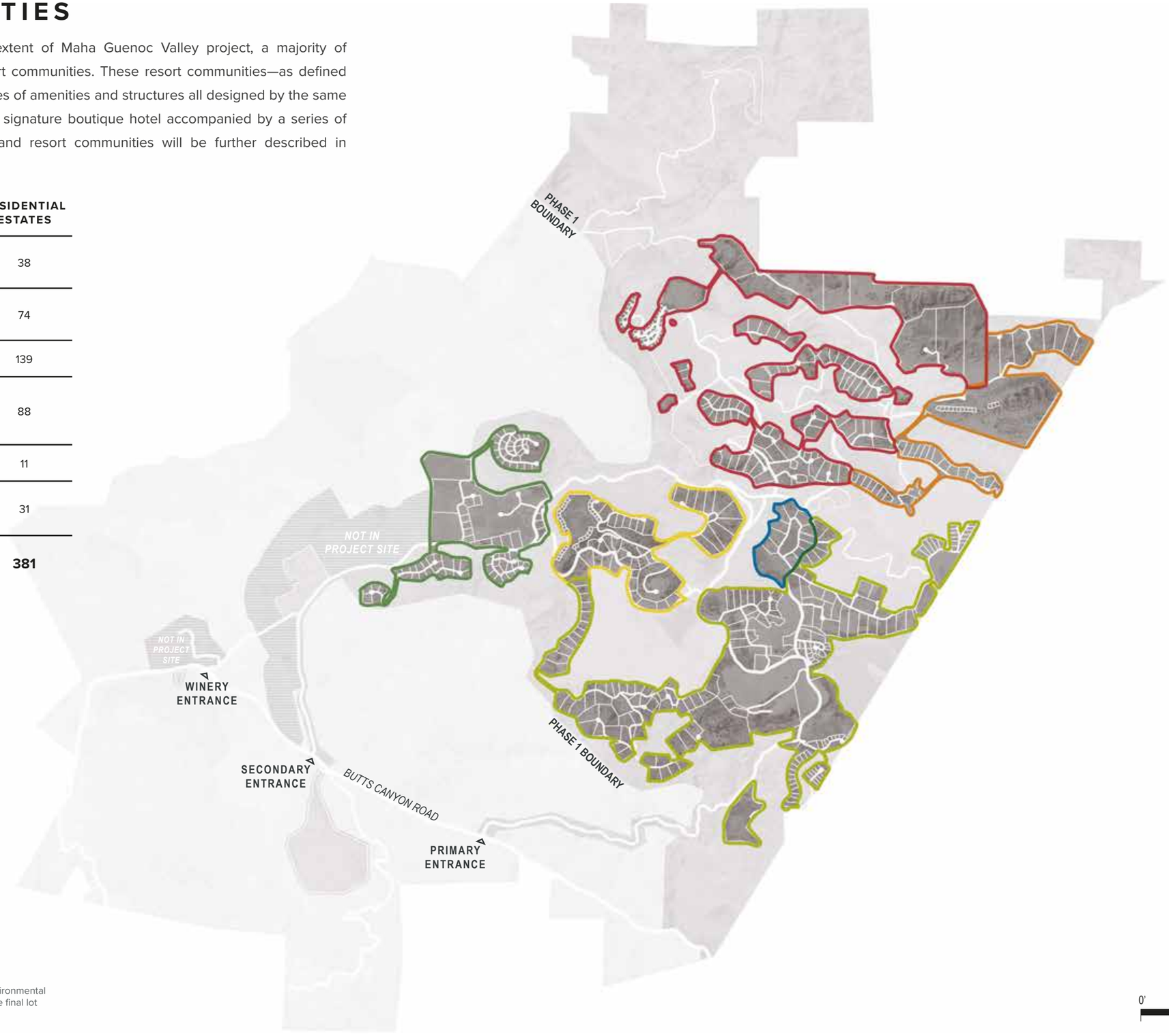


NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

RESORT COMMUNITIES

Although the site boundary determines the extent of Maha Guenoc Valley project, a majority of development will occur within a series of resort communities. These resort communities—as defined by the boundaries shown below—include a series of amenities and structures all designed by the same architect. Each resort community will include a signature boutique hotel accompanied by a series of residential properties. These hotels, resorts, and resort communities will be further described in Section 3: Architecture and Land Use Plans.

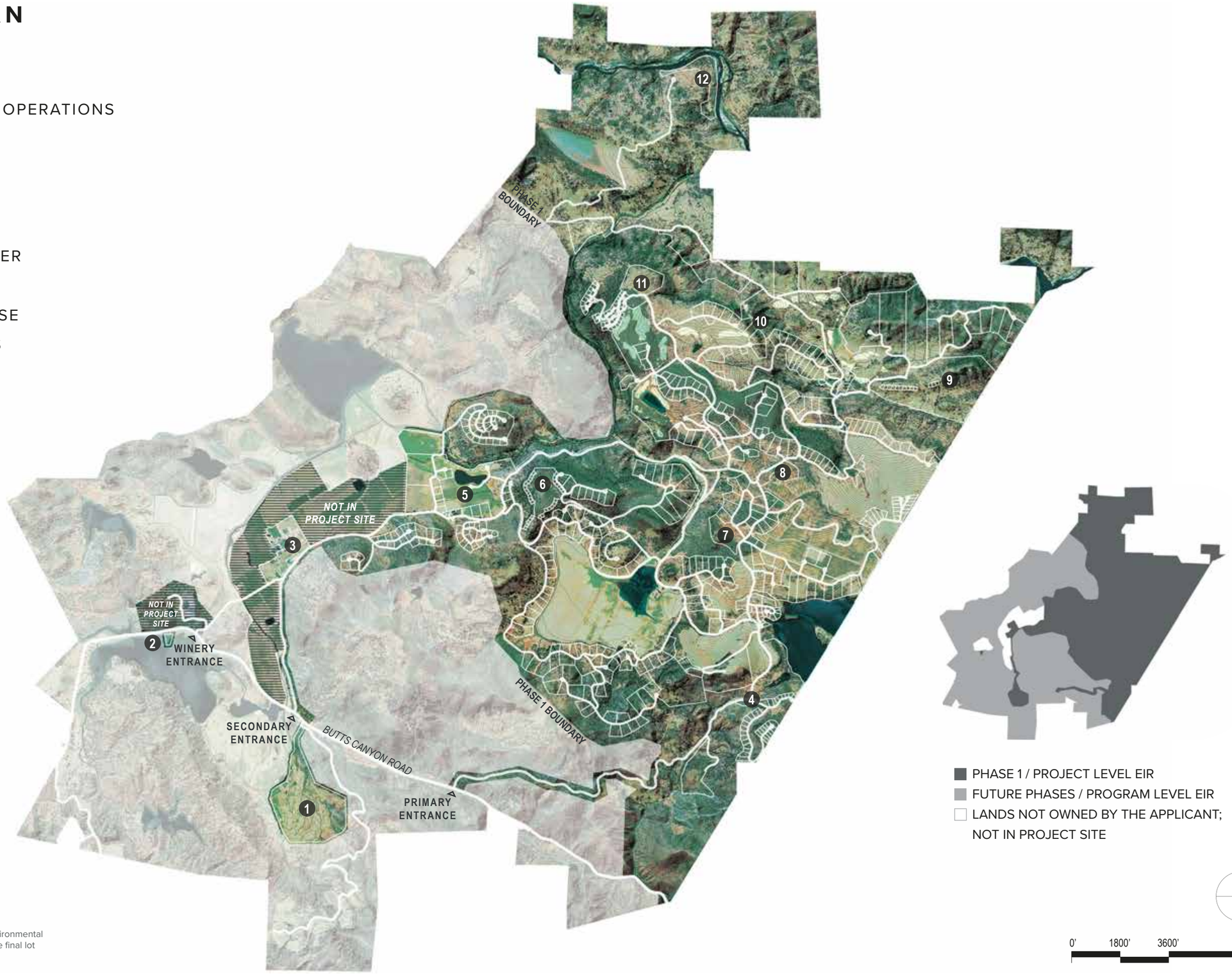
	HOTEL UNITS	RESORT RESIDENTIAL UNITS	RESIDENTIAL ESTATES
BOHN RIDGE RESORT COMMUNITY	31	30	38
EQUESTRIAN CENTER COMMUNITY	6	12	74
MAHA FARM COMMUNITY	48	49	139
DENNISTON GOLF ESTATES COMMUNITY	50	40	88
SPA COMMUNITY	0	0	11
RESORT AT TROUT FLAT COMMUNITY	20	13	31
TOTAL	**155**	**144**	**381**



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

PROJECT SITE PLAN

1 WORKFORCE HOUSING
2 AERIAL SITE ACCESS
3 CENTRAL BACK-OF-HOUSE OPERATIONS
4 MAHA FARM
5 EQUESTRIAN CENTER
6 BOHN RIDGE RESORT
7 SPA
8 SUPPORT SERVICES CLUSTER
9 RESORT AT TROUT FLAT
10 RENAISSANCE GOLF COURSE
11 DENNISTON GOLF ESTATES
12 TENTED CAMP AREA



PHASE 1 / PROJECT LEVEL EIR
FUTURE PHASES / PROGRAM LEVEL EIR
LANDS NOT OWNED BY THE APPLICANT; NOT IN PROJECT SITE

0' 1800' 3600' 7200'

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

ENVIRONMENTAL REVIEW

ENVIRONMENTAL REVIEW

The General Plan Amendment, and Area Plan Special Study Area No.3 map amendment, propose the GVD district. The project entitlements will be subject to both a program-level and project-level Environmental Impact Report (“EIR”), administered under the direction of the County of Lake; the project-level analysis will address the first phase of the Maha Resort, with subsequent phases of the project analyzed at a programmatic level.

The unique size, scale, and distinctiveness of the project will have a significant beneficial impact on the local community. Considering the multiple natural disasters in the last three years, the project we are proposing should offer many welcome benefits to the County (see the Community Benefit Map). Contributions to the County’s economy include new housing, workforce options, expansion of tourism, agriculture, and an overall increase in community pride. This project will include farm-to-table experiences, outdoor and indoor recreational uses, expansion of agricultural uses, workforce housing, open space preservation, and new jobs. Environmentally, this project also includes exceptional landscape management, proactive fire mitigation planning, and commitments to on-site renewable water reuse and potential renewable energy generation.

SECTION 2 LANDSCAPE

GUENOC VALLEY LANDSCAPE

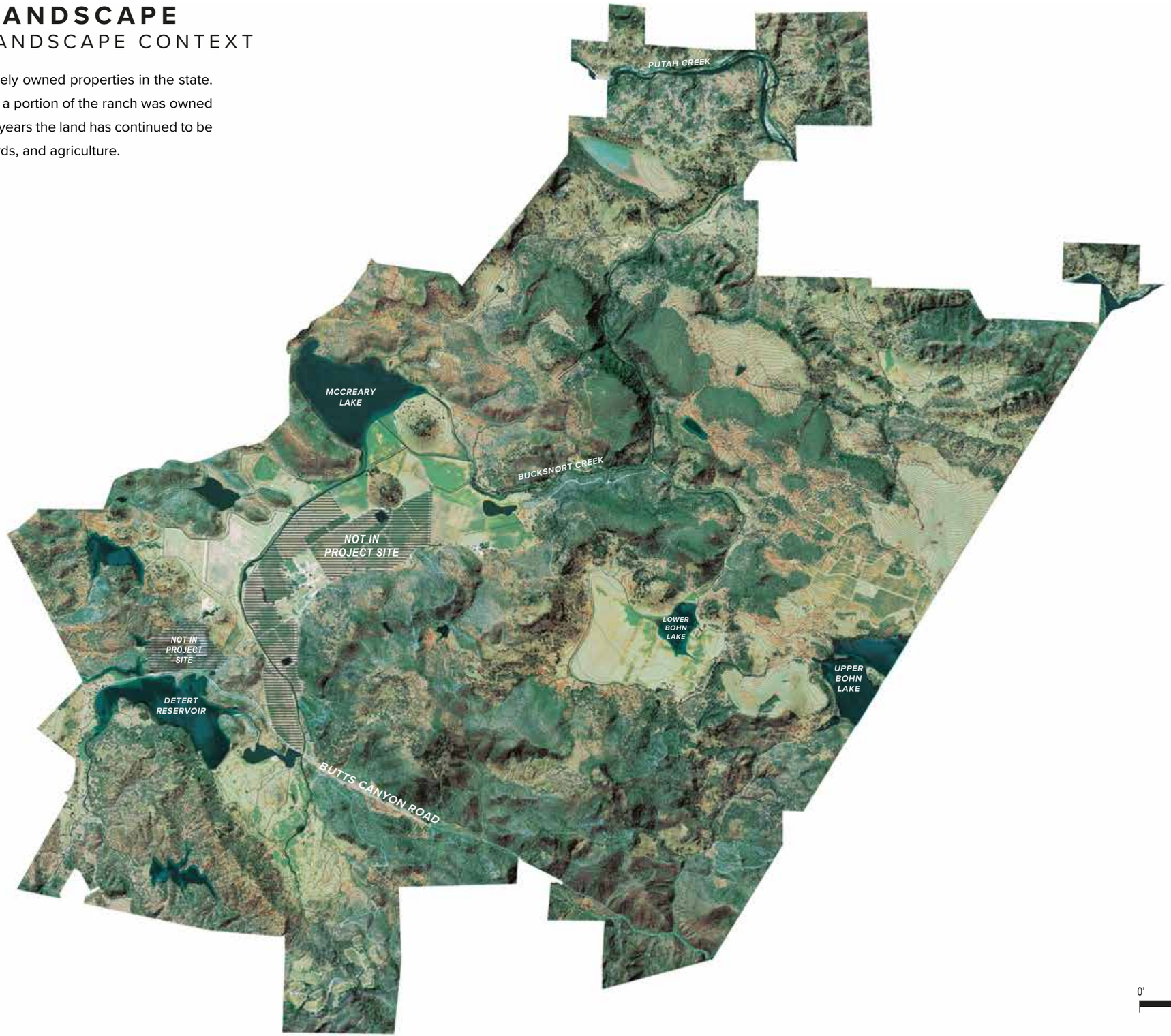
The project, currently consisting of 49 assessor's parcels totaling approximately 16,000 acres within Guenoc Valley, is located three miles southeast of Middletown on the southeast border of Lake County, bordering Yolo and Napa Counties to the south and east, with primary access along Butts Canyon Road. The Guenoc Ranch remains one of the largest privately owned properties in the state of California. The Hidden Valley Lake community, to the northwest, is undergoing continued development.

Guenoc Valley is a small inland valley set on an alluvial fan, isolated from surrounding areas by rocky ridges and volcanic rock. As part of the inner coastal range of Northern California, the site is characterized by uniquely varied topography, with rolling hills, oak woodlands, irrigated vineyards, grazing corridors, open space, and meadows. Ground elevation ranges from 62 to 950 feet above sea level. The average rainfall is 35 inches a year, slightly less than neighboring Middletown, with slightly greater seasonal temperatures, and generally less severe fog.

An existing loop road currently provides access from Guenoc Road, which intersects Butts Canyon Road across from the Detert Reservoir. The project anticipates continued utilization of the existing loop road, with a new intersection to be located approximately just over 1 mile from the existing intersection to the Langtry Winery.

GUENOC VALLEY LANDSCAPE
EXISTING & HISTORIC LANDSCAPE CONTEXT

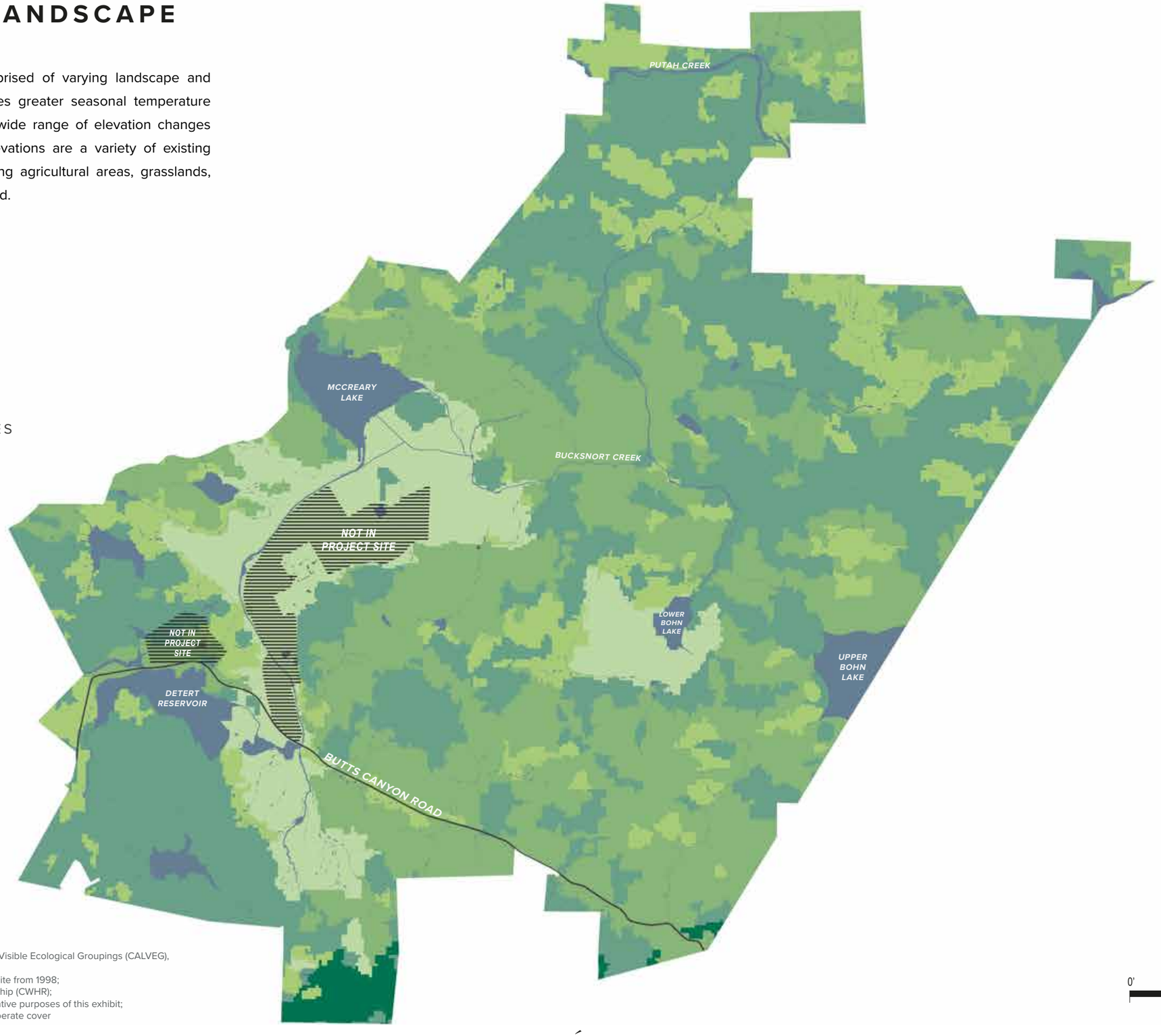
Guenoc Ranch remains one of the largest privately owned properties in the state. The property first came to public attention when a portion of the ranch was owned by the British Actress, Lillie Langtry. Through the years the land has continued to be utilized for outdoor recreational pursuits, vineyards, and agriculture.



GUENOC VALLEY LANDSCAPE
VEGETATION TYPES

Guenoc Valley, a small inland valley, is comprised of varying landscape and vegetation characteristics. The site experiences greater seasonal temperature extremes than neighboring areas, and has a wide range of elevation changes throughout the property. At these varying elevations are a variety of existing vegetation vegetation types and uses, including agricultural areas, grasslands, chaparral, oak woodlands, and general forestland.

- AGRICULTURE
- GRASSLANDS
- CHAPARRAL
- OAK WOODLANDS
- GENERAL FORESTLANDS
- WATER
- BARREN LAND AND ROCK PILES



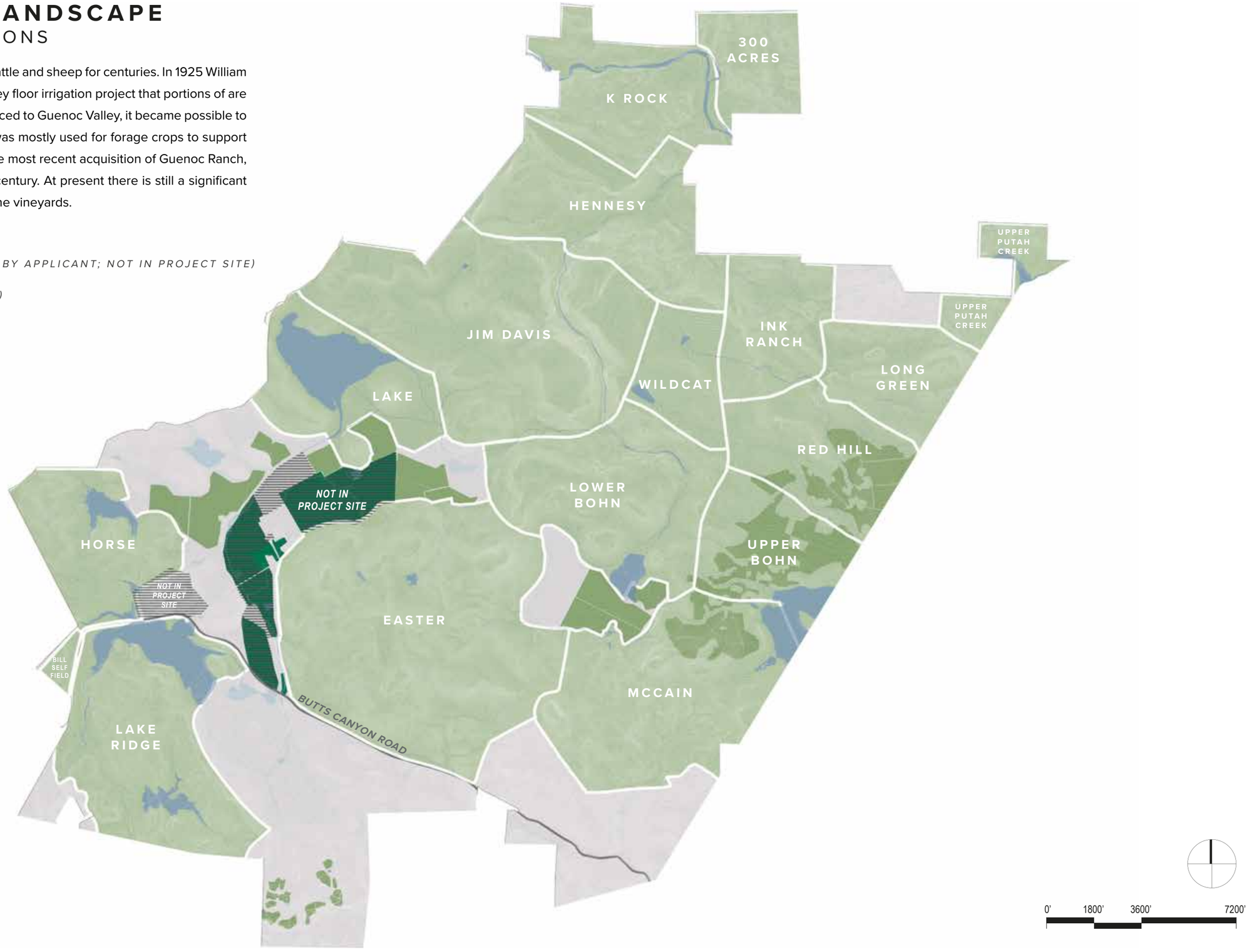
0’ 1800’ 3600’ 7200’

SOURCE
U.S. Forest Service, Classification and Assessment with LANDSAT of Visible Ecological Groupings (CALVEG),
EVeg Mid Region 5 North Coast Mid, January 18, 2018;
data source information ranges from the year 1998 to 2015; data for site from 1998;
data source crosswalked with the California Wildlife Habitat Relationship (CWHR);
CWHR categories simplified to the above seven categories for illustrative purposes of this exhibit;
a detailed survey of existing vegetation will be submitted under a seperate cover

GUENOC VALLEY LANDSCAPE
AGRICULTURAL OPERATIONS

Historically Guenoc Valley has been grazed by cattle and sheep for centuries. In 1925 William F. Detert built Detert Reservoir and started a valley floor irrigation project that portions of are still being used today. After irrigation was introduced to Guenoc Valley, it became possible to grow more agricultural crops, but the property was mostly used for forage crops to support the existing grazing operations. At the time of the most recent acquisition of Guenoc Ranch, the property had been farmed for more than a century. At present there is still a significant cattle and sheep operation in conjunction with the vineyards.

- LANGTRY VINEYARDS
- FOLEY VINEYARDS *(NOT OWNED BY APPLICANT; NOT IN PROJECT SITE)*
- PASTURES *(PASTURE NAME NOTED)*

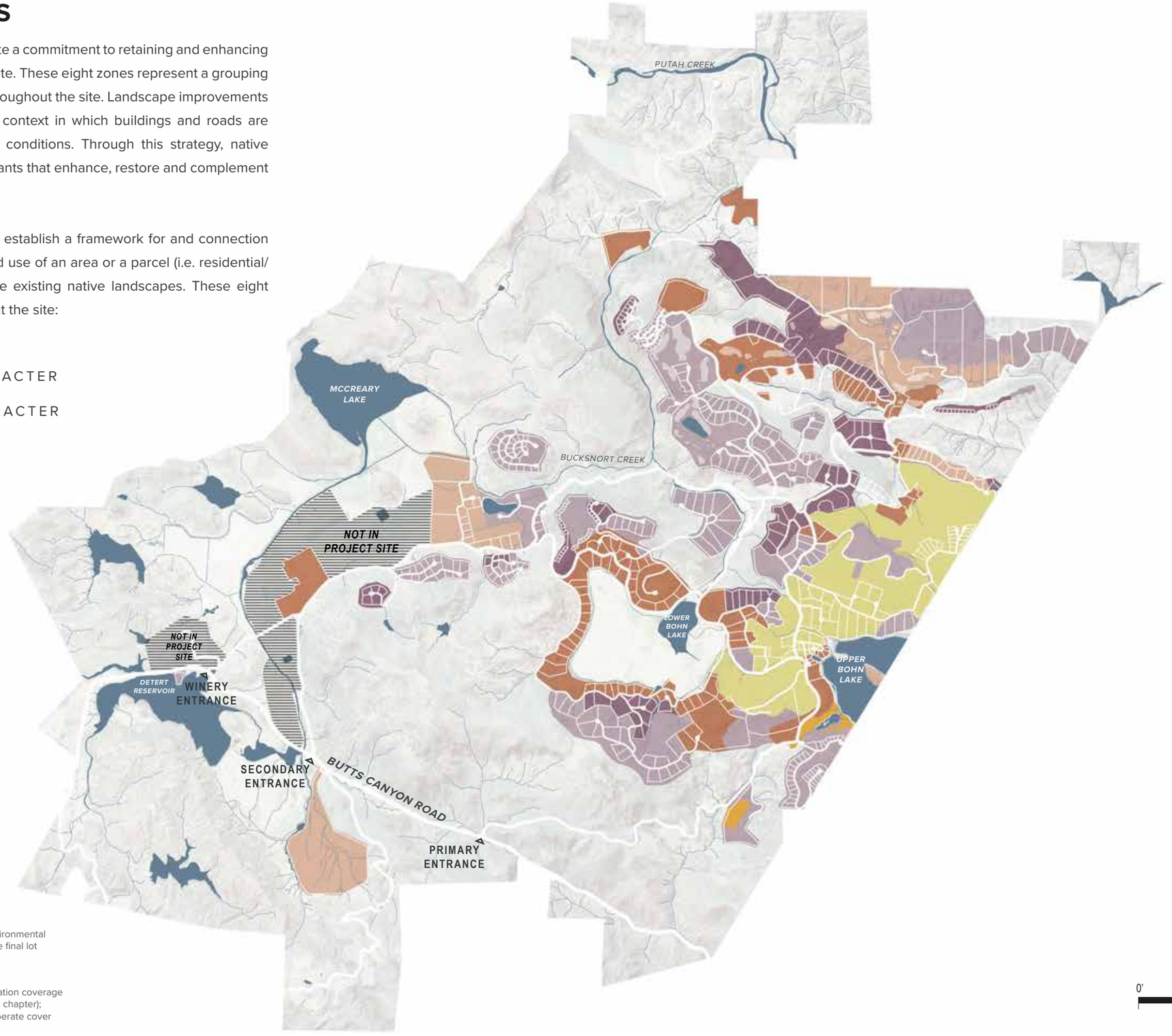


LANDSCAPE ZONES

The eight proposed landscape zones demonstrate a commitment to retaining and enhancing the existing landscape patterns throughout the site. These eight zones represent a grouping of a majority of landscape communities found throughout the site. Landscape improvements will exhibit a ‘light-touch’ approach, creating a context in which buildings and roads are closely integrated with the present landscape conditions. Through this strategy, native landscapes will be supplemented by adaptive plants that enhance, restore and complement the existing site character.

These proposed landscape zones are intended establish a framework for and connection between the landscape character of an intended use of an area or a parcel (i.e. residential/ commercial development or recreation) and the existing native landscapes. These eight zones will guide landscape strategies throughout the site:

- WOODLAND CHARACTER
- CHAPARRAL WOODLAND CHARACTER
- GRASSLAND WOODLAND CHARACTER
- GRASSLAND CHARACTER
- VINEYARDS CHARACTER
- FARMLAND CHARACTER
- WATERSIDE CHARACTER
- RURAL LANDSCAPES & RECREATION AREAS



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

SOURCE
Landscape zones concept based on public sources of existing vegetation coverage (see “Vegetation Types” exhibit with the “Guneoc Valley Landscapes” chapter); a detailed survey of existing vegetation will be submitted under a seperate cover

LANDSCAPE ZONES DESCRIPTIONS

WOODLAND CHARACTER

These areas are dominated by dense groves of oak woodlands, including the Blue Oak and the Valley Oak. Any landscape improvements within this zone will be limited to areas directly adjacent to buildings and roadways within low-impact residential and commercial development. Every effort will be made to enhance and emulate the existing woodland condition and preserve oaks during the development process, as these trees will be essential the residential and resort character throughout this zone.

CHAPARRAL WOODLAND CHARACTER

The Chaparral Woodland zone is characterized by often dense growth of chaparral species and scattered oak, pine and other trees. Seasonally varied, the large shrub species include Toyon, manzanita, chemise, grasses and other species. This vegetative community has been impacted by fire in the recent past and requires particular attention to manage, restore and maintain in a healthy, beautiful state.

GRASSLAND WOODLAND CHARACTER

The Grassland Woodland Zone, as its name suggests, consists of an understory of grasses and wildflowers under varied tree canopies. Historically grazing has been, and will continue to be instrumental in maintaining this landscape character throughout large portions of the Guenoc Valley site. The Grassland Woodland association will be the predominant approach and character for landscape improvements along roadways and residential development areas.

GRASSLAND CHARACTER

The Grassland Zone, naturally occurs in several portions of the site both south and north of Butts Canyon Road. Grasslands are characterized by a variety of native and non-native grasses and wildflowers with limited tree and chaparral cover. Landscape development within the Grassland zone will emphasize use of drought-tolerant native grasses, wildflowers and limited tree planting. Grasslands outside of development areas will continue to be managed for grazing.

VINEYARDS CHARACTER

Wine grape vineyards have been and will continue to provide an important and dominant landscape use and character for Guenoc Valley. The working vineyards will provide a strong visual connection to the site's history and a basis for an agricultural/agrarian landscape expression characterized by windrows, tree-lined roadways, special fencing and planting of vineyard perimeters. The irrigated vineyards also play an important role in providing irrigated and managed landscape, a key component minimizing fire risk.

FARMLAND CHARACTER

Productive farmlands are an important landscape character initially located at the Maha Farm, and will provide substantial food and fiber sources for guests, residents, and the local community. The farmlands will be intensively managed and include vegetable gardens, orchards, herbs, flowers, animal products and fiber sources. To the extent feasible, edible plantings will be extended beyond the large garden and orchards to guest patios, roadway plantings or other appropriate areas to create an integrated productive landscape experience.

WATERSIDE CHARACTER

Areas identified as Waterside Character include existing lakes, streams, seasonal drainages, and wetlands,. Development within and adjacent to waterside areas will include riparian plantings appropriate for the seasonal changes of water levels and flows that will transition to the adjacent landscape character in the uplands.

RURAL LANDSCAPES & RECREATION AREAS

The majority of the site will be maintained in a natural, rural state, supporting continued grazing and limited recreation uses such as hiking, horseback riding or similar uses. Except for the vineyards and farmland character zones, all other landscape types occur throughout this zone.

LANDSCAPE ZONES COMMON EXISTING PLANTS

Each Landscape Zone includes a variety of existing plant species, both native and non-native, with some overlap between zones, examples shown here. New development or restoration within any single zone will include a carefully selected list of existing species including grasses, shrubs and trees to distinguish the area and to provide a framework for new landscapes.

- N CALIFORNIA NATIVE
- WOODLAND
- CHAPARRAL WOODLAND
- GRASSLAND WOODLAND
- GRASSLAND
- VINEYARDS
- FARMLAND
- WATERSIDE
- RURAL LANDSCAPES & RECREATION AREAS

N

PURPLE NEEDLE GRASS | Nassella (Stipa) pulchra

N

CALIFORNIA OAT GRASS | Dantonia californica

WILD OATS | Avena (barbata, fatua)

N

HARDSTEM BULRUSH | Schoenoplectus acutus

PETITE SIRAH | Vitis vinifera

N

COFFEEBERRY | Rhamnus california

N

SUGAR BUSH | Prunus ilicifolia

N

MANZANITA | Arctostaphyllos spp.

N

BLUE OAK | Quercus douglassii

N

VALLEY OAK | Quercus lobata

N

CANYON LIVE OAK | Quercus chrysolepis

LANDSCAPE ZONES ADDITIONAL COMPLEMENTARY PLANTS

Within each zone, new landscaping will include a special palette of existing plants, supplemented by a specialized list of complementary plant species, examples show here. The intent is to give each area a distinctive character that is based on the existing vegetative association found in the zone, supplemented with other plantings that provide richness, seasonal variation, special character or habitat value.

- N CALIFORNIA NATIVE
- WOODLAND
- CHAPARRAL WOODLAND
- GRASSLAND WOODLAND
- GRASSLAND
- VINEYARDS
- FARMLAND
- WATERSIDE
- RURAL LANDSCAPES & RECREATION AREAS

N

IDAHO FESCUE | Festuca idahoensis

N

BLUE WILD RYE | Elymus glaucus

N

CALIFORNIA OATGRASS | Dantonia californica

N

BUCKWHEAT | Eriogonum fasciculatum

N

MARINA STRAWBERRY TREE | Arbutus ‘Marina’

N

WESTERN REDBUD | Cercis occidentalis

FUJI APPLE | Malus pumila

LONDON PLANE | Platanus × acerifolia

N

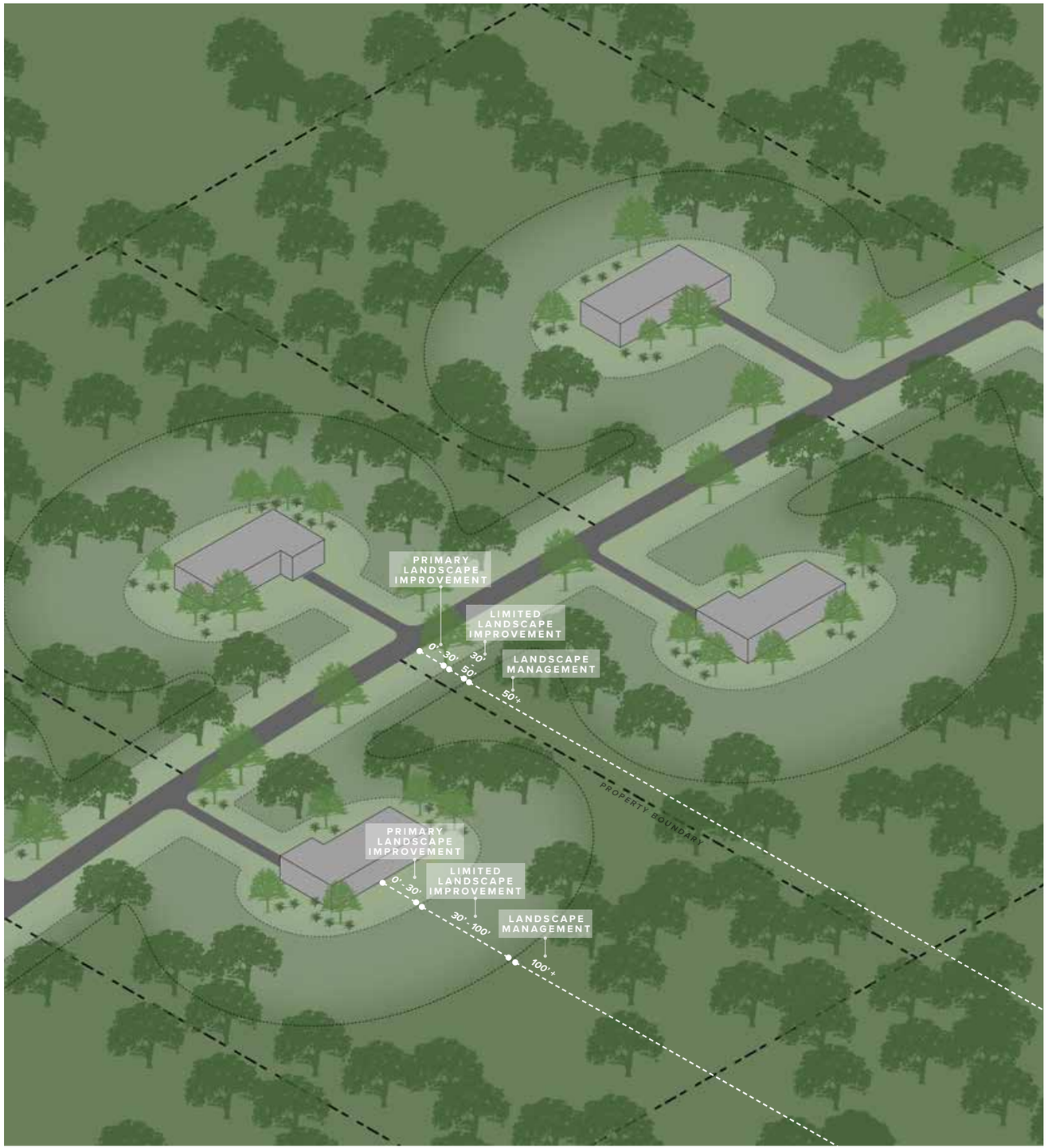
CALIFORNIA SYCAMORE | Platanus racemosa

N

BLACK WALNUT | Juglans californica

OLIVE | Olea europaea

LANDSCAPE ZONES TYPICAL LANDSCAPE STRATEGY



LANDSCAPE IMPROVEMENT EXTENTS

The overall approach to landscape improvements throughout the site are to exhibit a “light touch” approach that emphasizes the existing natural and rural character. New landscaping will generally provide a transition between more highly developed (and irrigated) landscapes near buildings and selectively along roadways to more natural landscapes managed to reduce fire risk.

PRIMARY LANDSCAPE IMPROVEMENT

0’ - 30’ FROM EDGE OF ROADS AND BUILDINGS

The majority of newly planted and irrigated landscape will be within this area. The landscape design will be guided by the landscape zone character and fuel reduction standard, which includes a priortization of native and low fuel vegetation.

LIMITED LANDSCAPE IMPROVEMENT

30’ - 50’ FROM EDGE OF ROADWAYS; 30’ - 100’ FROM EDGE OF BUILDINGS

A limited amount of landscape improvement will occur within this buffer area. The landscape improvements within this area will be minimal, and mostly involve defining the edges of the landscape design and reducing vegetated fire risk.

LANDSCAPE MANAGEMENT

BEYOND 50’ FROM EDGE OF ROADWAYS; BEYOND 100’ FROM EDGE OF BUILDINGS

Within this area, plants and vegetated conditions with a high fire risk concern will be selectively addressed. This will primarily include cutting down dead and highly-combustible vegetation. Otherwise, the existing landscape will be conserved to the maximum extent.

AGRICULTURE

Both historic and active agricultural practices such as vineyards and grazing operations are part of the culture of the Guenoc Valley. The project proposes to continue this historic land use culture and expand it for on-site food production. Furthering agriculture within Guenoc Valley, through promotion of local produce and artisans' products, farm-to-table restaurants, farmers markets, and recreational activities, will ensure the continued viability of Lake County's agricultural culture and economy. Furthermore, the grazing of livestock on the landscape enhances agri-tourism experiences, helps promote local agricultural products and supports fire management strategies for vegetative management. By farming grass-fed beef, sheep and goats, the project will create a variety of opportunities for agriculture within the Maha Farm and throughout the site.

VINEYARDS

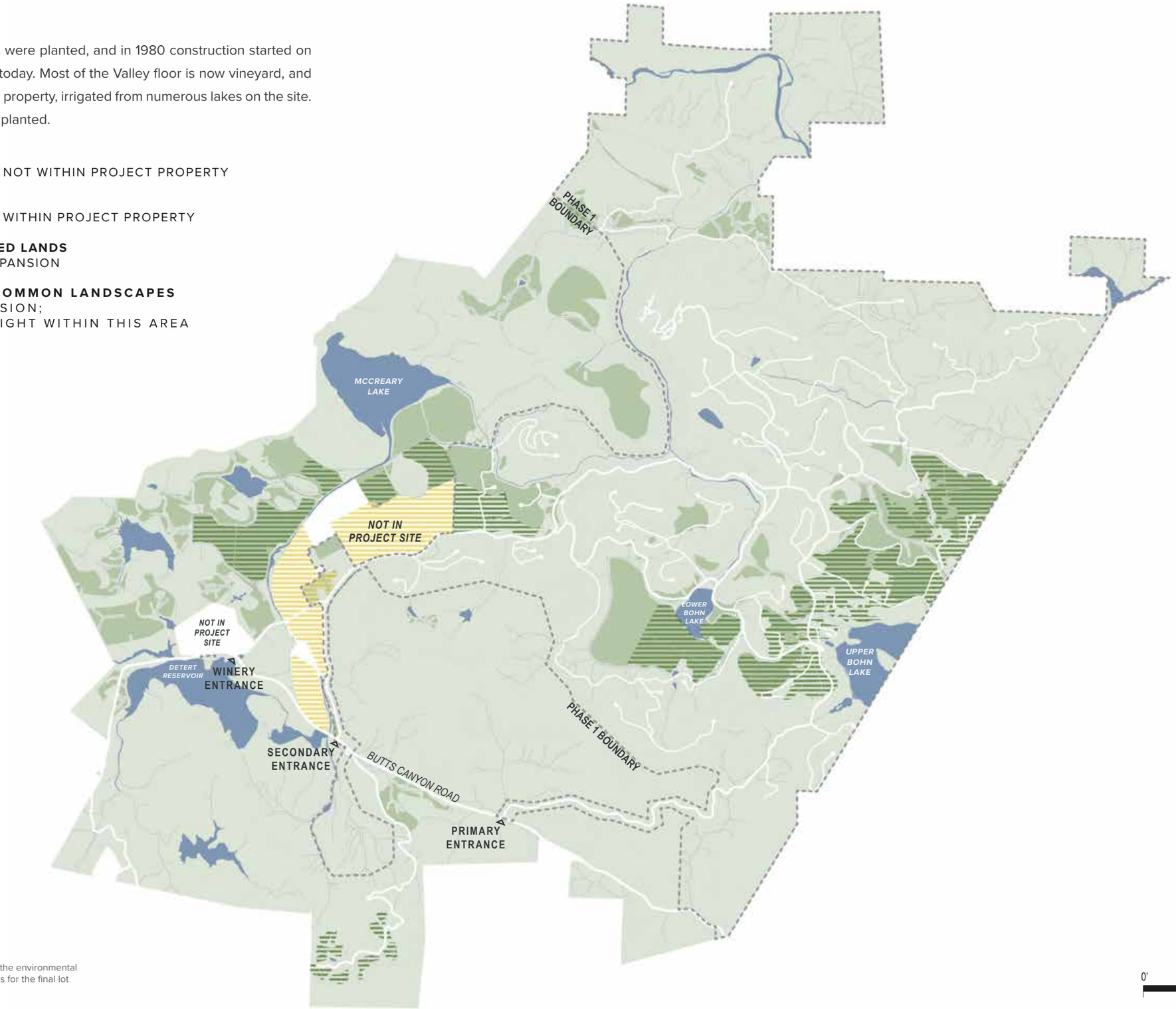
In the late 1970's, some irrigated vineyards were planted, and in 1980 construction started on Guenoc Winery which is still in production today. Most of the Valley floor is now vineyard, and vineyards are being planted throughout the property, irrigated from numerous lakes on the site. There are 964 acres of vineyards currently planted.

FOLEY VINEYARDS
CURRENTLY PLANTED VINEYARDS NOT WITHIN PROJECT PROPERTY

LANGTRY VINEYARDS
CURRENTLY PLANTED VINEYARDS WITHIN PROJECT PROPERTY

POTENTIAL VINEYARDS ON LEASED LANDS
AREAS FOR LEASED VINEYARD EXPANSION

POTENTIAL VINEYARDS ON COMMON LANDSCAPES
AREAS FOR VINEYARD EXPANSION;
AGRICULTURE ALLOWED BY RIGHT WITHIN THIS AREA



0' 1800' 3600' 7200'

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

DIVERSIFIED AGRICULTURE

The following farming activities will occur at Maha Farm and throughout the site:

A CSA program for residents – A Community Supported Agriculture (CSA) program consists of a community of individuals who pledge support to a farm operation by paying a subscription fee to get various products delivered. The community and the growers provide mutual support and share in the risks and benefits of food production. Residents who opt to participate in a CSA program as well as the visitors will be able to purchase beef from the resident herd, pursuant to USDA laws about purchasing grass fed beef shares. (Animals are purchased directly from the farm, but slaughtered, butchered and wrapped at a USDA facility.)

Beef for restaurants & retail – Beef from the resident herd, once slaughtered and butchered off-site, will be returned to an on-site butchery for further handling. Thus, beef from the on-site herd can be supplied to the on-site restaurants, and also sold at retail outlets at the Maha Farm.

Tallow candles & beef cuts for retail sale – Beef tallow can be used to create candles for workshops and for sale in various retail outlets, including the Farmer's Market and Grocery.

Lamb for restaurants & retail – Lamb from either the on-site resident herd or from the seasonal herd will be sent off-site to a certified slaughter facility and butchering facility, and a small portion will be processed by the Maha butchery for sale to restaurants and at the farmer's market and included as a CSA option as well.

Wool shearing and fiber spinning – Wool sheared from the sheep that graze the site can be hand-processed into fiber products including hand-spinning and felted products used for on-site workshops. Wool can then be turned into various fiber products and sold on-site.

Agriculture and Horticulture – Up to five acres will be allocated on the Maha Farm site for the production of annual and perennial crops to produce a suite of mixed vegetables, fruits, and nuts. Value-added products, including pickling and jam preserves will also be processed on-site.

Hedgerows, windbreaks, and Integrated Pest Management (IPM) – Native Hedgerows will be planted for a variety of uses, including: aesthetic landscape borders, fire breaks, pollinator and bird habitat, carbon sequestration and other ecosystem services. These hedgerows will be places in various locations around the Maha Farm to ensure adequate plant material for harvesting (willow, dye plants) and provide resources for local fauna and flora, including perennials that will bloom during the times when bees may require extra forage.

Flower Farm – a small portion of the garden area within the Maha Farm's mixed vegetable/orchard will be set aside for the growing of flowers for the Maha hotels and also for sale in the farmer's market and other retail outlets. This will be managed by a resident flower-farmer, tending to a year-round flower and dye garden.

Agroforestry & poultry production – Integrated into the farm operation in further phases of the development will be a small-scale pastured poultry operation, which will help manage insect populations, fertilize soil, and contribute to the overall aesthetics of the farm, in addition to providing eggs on-site and meat for resident and guest consumption. Meat Birds will be processed at a state-inspected slaughter facility such as American Poultry, in Sacramento, or the Rabbit barn, Turlock or Mary's Chicken in Petaluma. Ultimately, Maha will consider investing in developing its own state-inspected meat bird facility.

Apothecary with Herbs Processing Facility – This will showcase an "old-timey" country store that sells dried herbs and tinctures, alongside teas, herbs, soaps, candles, and a variety of other natural products available for purchase. Many of these will be produced on-site and there is ample opportunity to educate customers about the source ingredients, enhancing their connection to the property.

On-site bee operation (for honey and bee pollen) – An on-site bee operation with at least 30 hives can supply the restaurant and various on-site retail areas with honey and bee pollen.

Small-scale dairy – In later phases of the project a regenerative, pasture-based dairy may be developed to ensure high-quality local dairy products for client consumption.

Aquaculture / aquaponics – Aquaponics is slated to be incorporated into the farming system.

Greenwave – bivalves + purple urchins – We are considering a polyculture farming system that can yield shellfish and seaweed. This system can also incorporate the production of purple urchins.

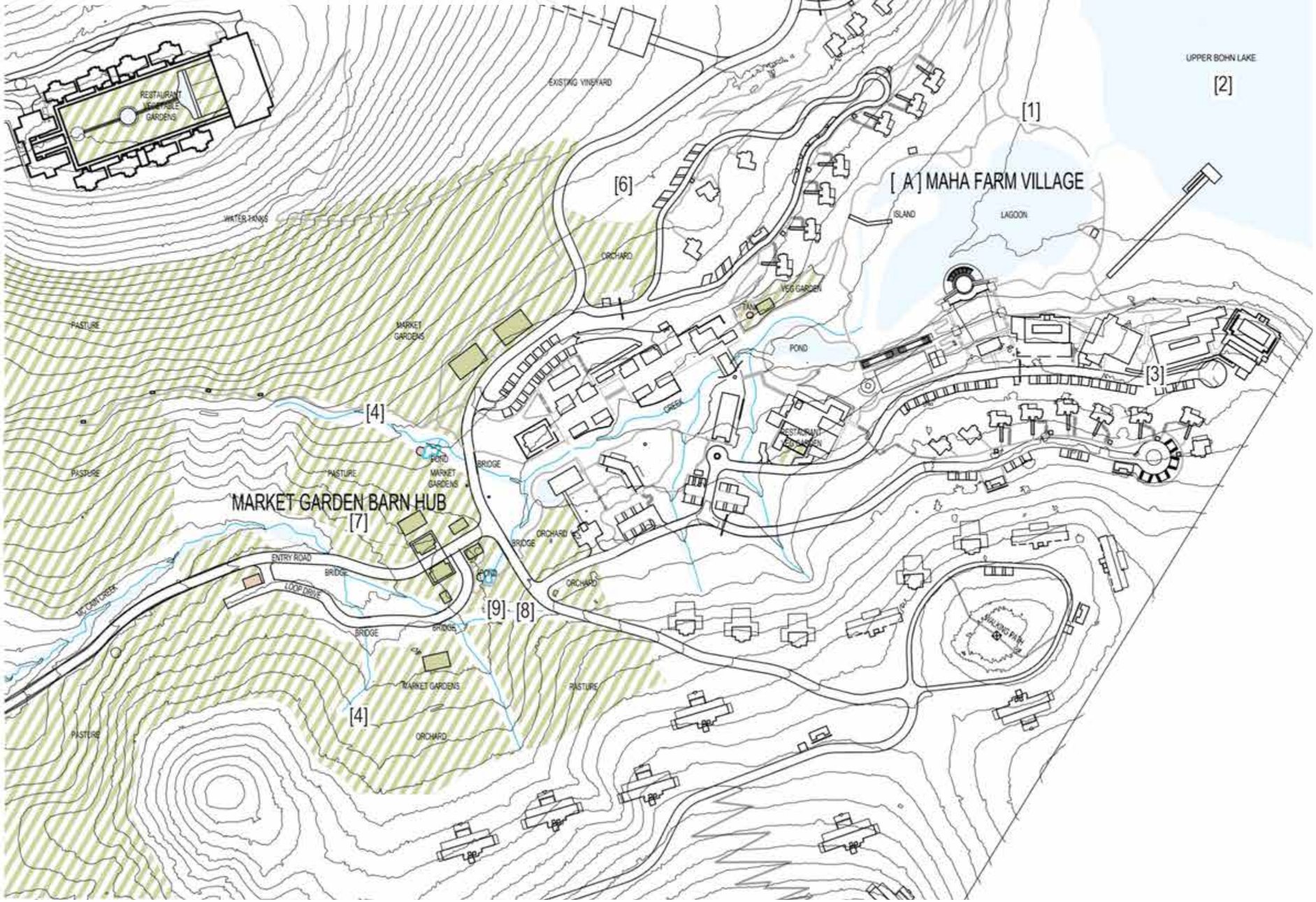
Wild forage – Opportunities to forage for native plants, including mushrooms, will be offered under the supervision of a certified mycologist or botanist.

Composting – All organic materials will be composted on-site in compliance with CA Air Resources, CA Water Resources board and CALRecycle on-site composting regulations. SOPs for appropriate composting will be regularly updated and there will be a compost manager assigned to manage the composting and stay updated with the regulatory environment. To minimize the amount of greenhouse gas emissions from composting, we are considering utilizing an Aerated Static Pile composting system.

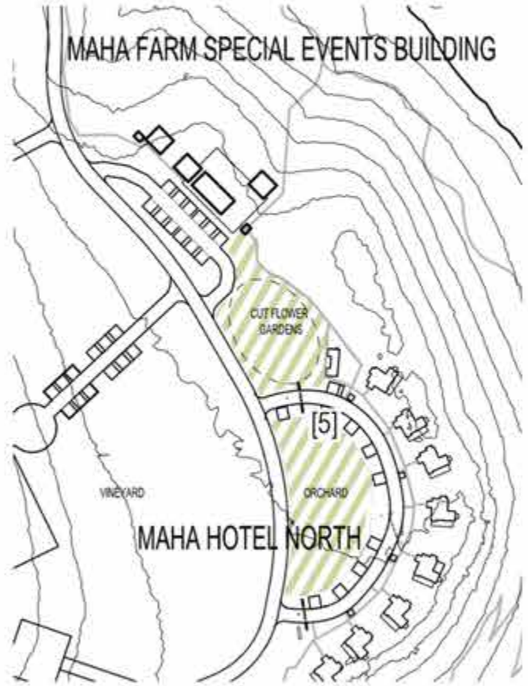
FARMING ACTIVITIES AT MAHA FARM

VEGETABLE GARDENS, FARMING ISLANDS, FRUIT & NUT ORCHARDS

The farm-to-table concept for the restaurants and hotel service offered by the resort is supported by extensive vegetable gardens, native plant foraging areas and fruit & nut orchards located throughout Maha Farm. The productive growing areas are located in and around the Village, centered on the Market Garden Barn Hub, as well as a showcase restaurant garden at the Sales Center at Hilltop Lodge.



COLOR LEGEND				
AGRICULTURE- OUTDOOR		AGRICULTURE- ACCESSORY		
MAHA FARM VEGETABLE GARDENS & ORCHARDS				
MAHA RESTAURANT VEGETABLE GARDENS	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	1.5 ACRES
MARKET GARDEN BARN HUB	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	7.3 ACRES
ORCHARD	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	3.8 ACRES
ANIMAL PASTURES	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	40 ACRES
FLOWER GARDENS	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	0.8 ACRES
SALES CENTER VEGETABLE GARDENS	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	1.2 ACRES
GRAND TOTAL			000 SF	up to 54.6 ACRES



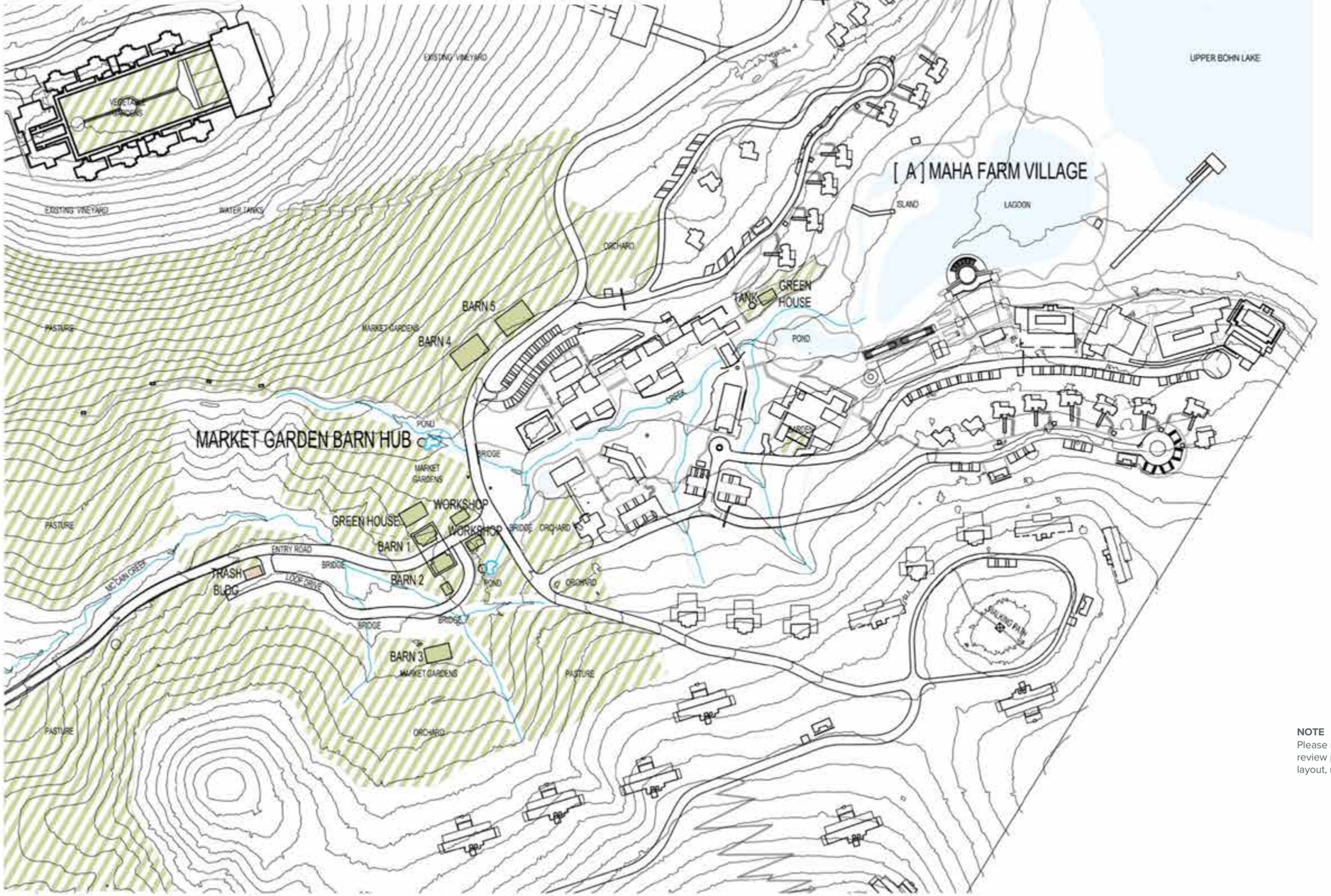
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 125' 250' 500'

FARMING ACTIVITIES FARM BARN LAND USE FLOOR PLANS

MAHA FARM BARNS

The Market Garden Farm Barn Hub site features a series of greenhouses, workshops, tool sheds, mobile chicken coops, animal barns, produce treatment spaces and farm barns surrounded by productive gardens, animal pastures, chicken run and orchards showcasing Maha Resort agricultural activities and products. Farming activities will be available for guest participation and education.



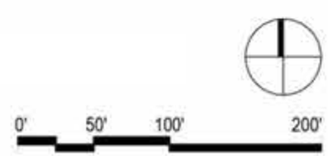
COLOR LEGEND

- AGRICULTURE- ACCESSORY
- AGRICULTURE- OUTDOOR
- RESORT-UTILITY

MAHA FARM BARNS

HS HIKER / HORSE SHELTERS	RESORT ACCESSORY	OUTDOOR RECREATION	400 SF X 11 = 4,400 SF	
MAIN BARN: BARN 1 & 2	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	6,500 SF	
BARN 3	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	2,500 SF	
BARN 4	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	2,500 SF	
BARN 5	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	2,500 SF	
AG ANIMAL SHELTERS	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	400 SF X 4 = 1,600 SF	
WORKSHOP 1	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	1,000 SF	
WORKSHOP 2	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	1,000 SF	
GREENHOUSE 1	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	4,000 SF	
GREENHOUSE 2	AGRICULTURE ACCESSORY	SUPPORTING FACILITY	4,000 SF	
GREENHOUSE 3	DELETED			
GARDENS	AGRICULTURE PRIMARY	AGRICULTURE		54.6 ACRES
GRAND TOTAL			30,000 SF	54.6 ACRES

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.



GRAZING ACTIVITIES

The project's grazing plan takes a current on-site use and continues that use while harnessing the potential for landscape management, providing high fuel load vegetation reduction and site-wide fire mitigation activities.

The project is committed to landscape stewardship. The managed grazing of livestock is a primary tenet of sustainable agriculture and fire prevention both in the open space and designated corridors. Well-managed grazing balances regular and systematic movement of animals to forage and reduce fuel loads thought the site. Targeted grazing by expanding the current use of cattle, sheep or goats can measurably reduce or eliminated fire ladders, therefore promoting fire resilience on site. Additionally, grazing promotes grassland health and diversity, reduces internal susceptibility to wildfires, and increases soil organic carbon helping the on-site water retention. Therefore, Maha Resort utilizes managed grazing in our comprehensive fire management plan.

GRAZING STANDARDS MATRIX

The following matrix provides general standards to guide site-wide, long-term grazing practices. Although the exact configuration of grazing areas and corridors may shift over time, these general parameters will help to coordinate the placement and movement of herds throughout the site.

Species	**Primary Foraging Behavior**	**Equivalent Animal Unit** *	**Preferred Vegetation**	**Minimum Practical Grazing Area** (Acres) **	**Maximum Practical Grazing Slope** (Percent %) (Wet Ground / Dry Ground)	**Maximum Density** (lbs per acre) (Wet Ground/Dry Ground) ***	**Grazing Season**	**Herd Type**
Goats	Browsing	0.2	Chaparral, Brush, Poison Oak, Weeds	0.15 AC	60% / 80%	15,000 lbs / 60,000 lbs	April - October	Seasonal/ Contracted
Sheep	Grazing	0.2	Oak Woodland/ Grassland, select weeds	0.15 AC	60% / 80%	15,000 lbs / 60,000 lbs	April - June	Seasonal/ Contracted
Cattle	Grazing	1.0	Oak Woodland/ Grassland	0.5 AC	50% / 70%	10,000 lbs / 50,000 lbs	Year Round	Resident

* ”Equivalent Animal Units” establishes a consistent unit factor to compare herd sizes; for example, a herd of 10 cows (1.0 AU) is equivalent to a herd of 50 goats (0.2 AU)
** The “Minimum Practical Grazing Area” is signfigantly dependent on herd size; these minimum practical grazing areas assume that herd sizes will remain equally small in order to accomodate efficient grazing in and around small spaces between buidlings and roads.
*** The “Maximum Density” is the maximum collective herd weight supported per grazeable acre

GOAT BROWSING

SHEEP GRAZING

CATTLE GRAZING

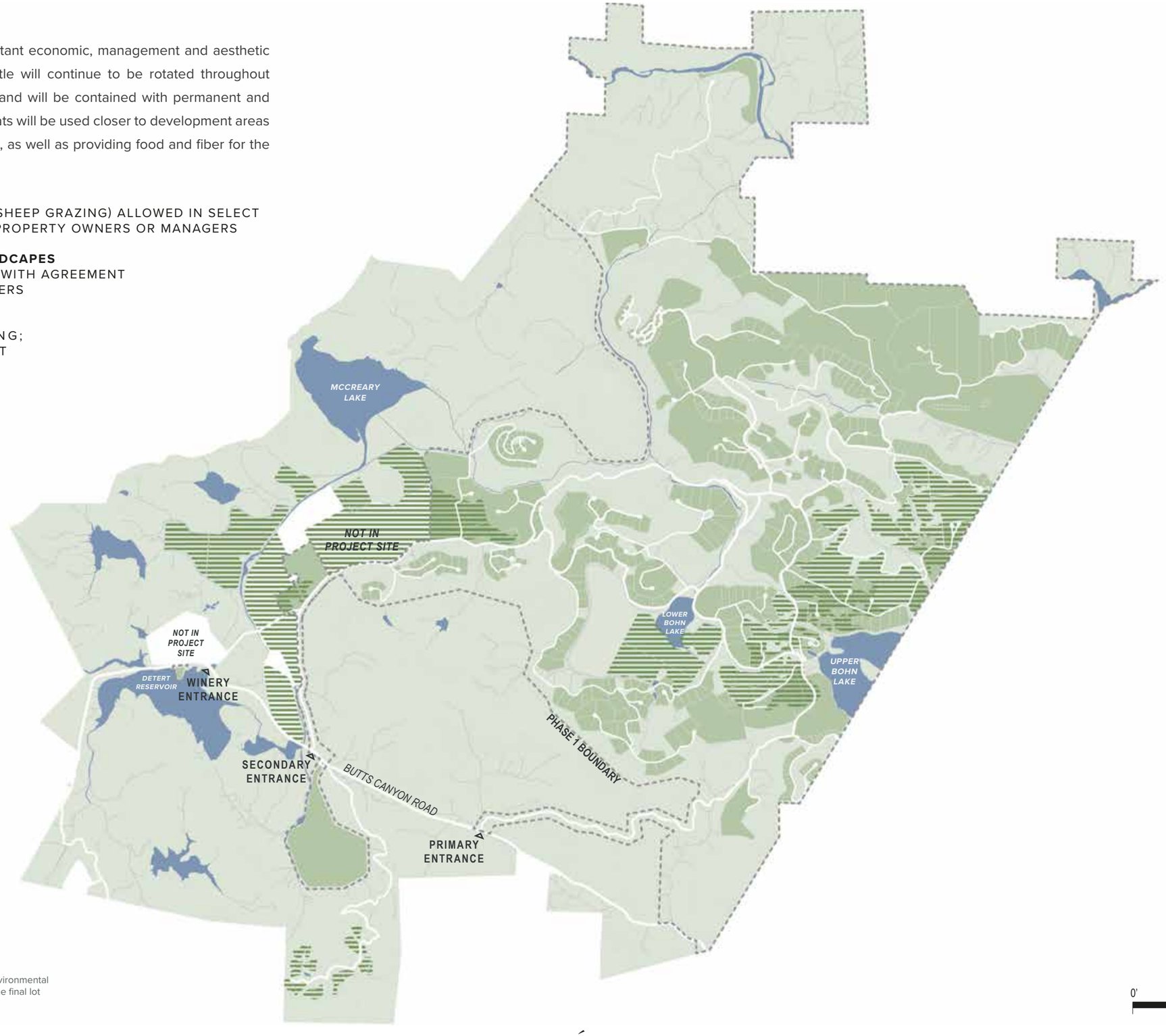
GRAZING

Animal husbandry will continue to be an important economic, management and aesthetic experience of the Guenoc Valley Project. Cattle will continue to be rotated throughout the site within larger open and pasture areas and will be contained with permanent and temporary fencing as applicable. Sheep and goats will be used closer to development areas to aid in reducing vegetative cover and fire risk, as well as providing food and fiber for the Maha Farm.

VINEYARDS
MINIMALLY IMPACTFUL GRAZING (I.E. SHEEP GRAZING) ALLOWED IN SELECT VINEYARDS WITH AGREEMENT FROM PROPERTY OWNERS OR MANAGERS

RESIDENTIAL AND COMMERCIAL LANDCAPES
GRAZING ALLOWED IN SELECT AREAS WITH AGREEMENT FROM PROPERTY OWNERS OR MANAGERS

COMMON LANDSCAPES
CONTINUED YEAR-ROUND GRAZING; AGRICULTURE ALLOWED BY RIGHT



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

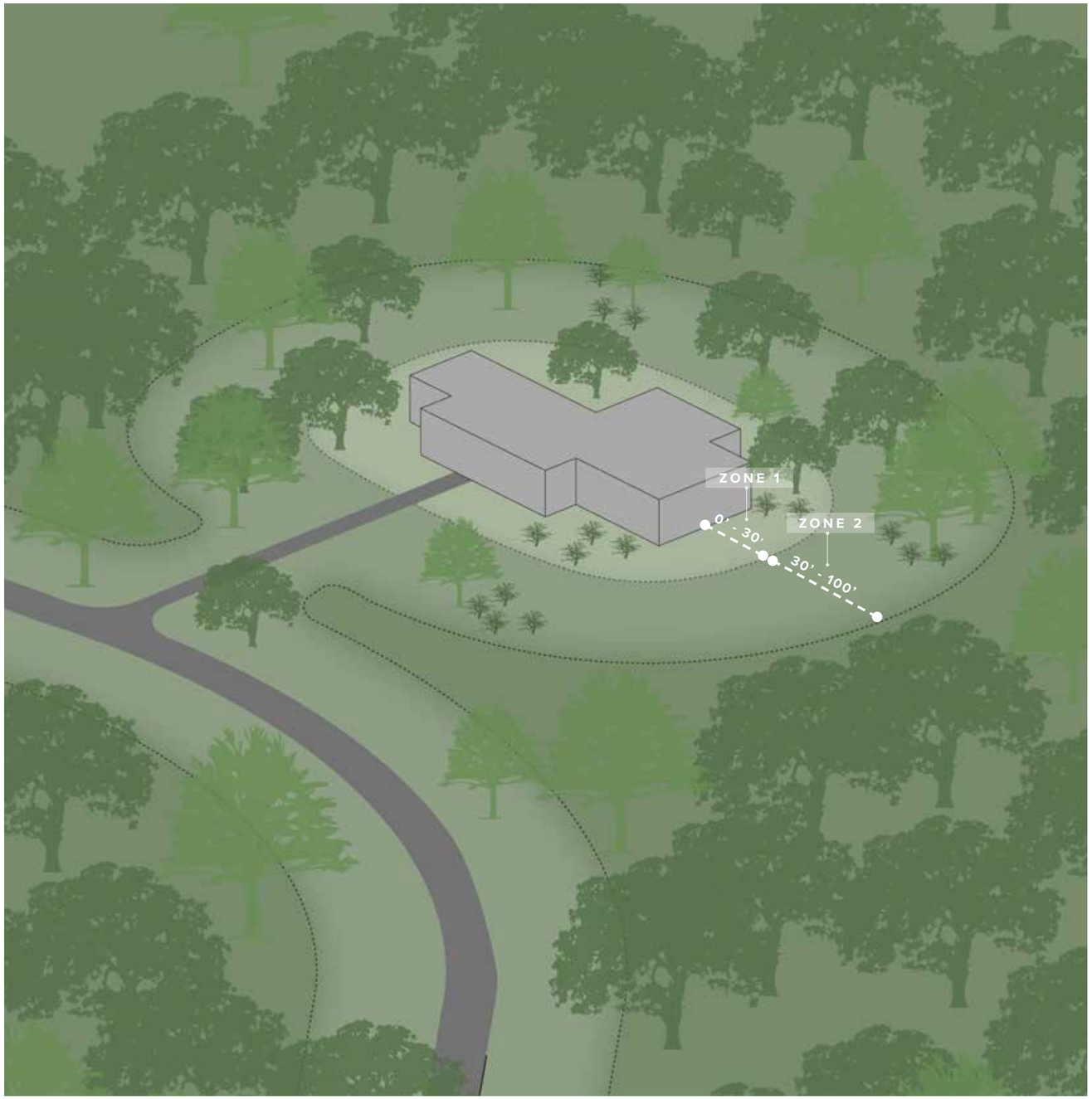
LANDSCAPE FIRE PLAN

The site is located in a high fire hazard area as classified by the California Department of Forestry and Fire Protection (CDF). Development in wildland hazard areas is required to meet safety and design standards. Measures beyond the minimum fire safety regulations have been proposed by the development to ensure adequate access, fuel breaks, temporary areas of refuge and vegetation management, such as the construction of an on-site emergency fire center and helipad for emergency access/transportation. Multiple on-site water sources are available for fire suppression and will be supplemented, in architectural clusters, with fire hydrants for first responders. Extensive fire management plans and fire mitigation strategies are outlined in the Guenoc Valley Emergency Action and Fire Management Plan.

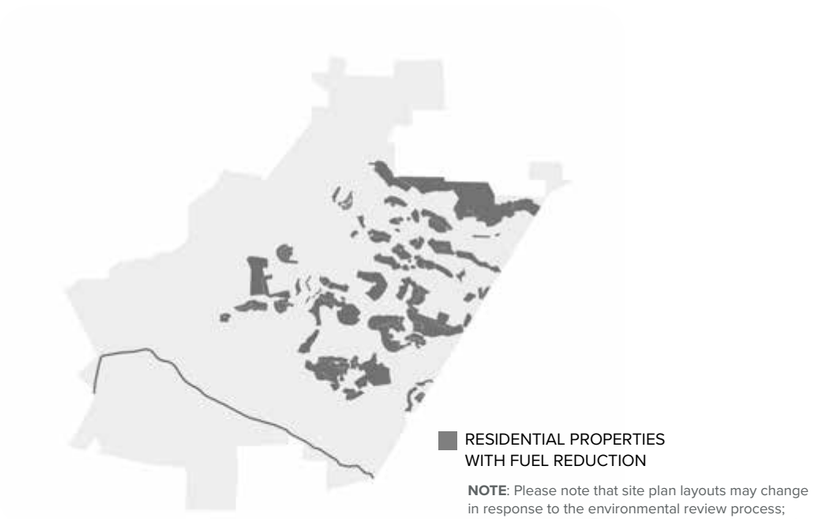
A development of this size and expense requires all measures possible to protect and preserve the environment, buildings and longevity of the landscape. It is in the best interest of both the long-term viability of the project and the County to plan for wildfire risk and to actively manage the landscape to reduce the risks as well as to plan for first responder access and emergency response plans to ensure and improve public safety. With careful planning and maintenance of defensible space the project is offering 27 miles of fuel breaks through the entire project. This is possible due to the commitment the project has made that all two-lane roads will be maintained with a 50-foot buffer on each side, resulting in continued site-wide fuel breaks.

In anticipation of the high level of vegetation and fuel management and maintenance of buffer zones, the greatest fire threat will often be an exterior threat. In an effort to mitigate exterior threats, on-site dozers will be available for emergency fire digging, to be utilized by approval of Cal Fire. Additionally, measures such as an on-site emergency response center and on-site all terrain response vehicles will be available for first responders.

RESIDENTIAL TYPICAL FUEL REDUCTION STRATEGY



RESIDENTIAL PROPERTY LOCATIONS



RESIDENTIAL PROPERTIES WITH FUEL REDUCTION

NOTE: Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

RESIDENTIAL FUEL REDUCTION ZONES

All residential properties will follow common fuel reduction strategies established by Public Resource Code (PRC) Section 4291. This involves creating and maintaining a defensible property in the fire management strategies described below.

BUILDING CONSTRUCT TO WILDLAND-URBAN INTERFACE (WUI) BUILDING CODES

Buildings will be constructed using materials that resist ignition or sustained burning when exposed to embers and small flames from wildfire. Exterior fire sprinkler systems will be installed on all buildings with independent water connections.

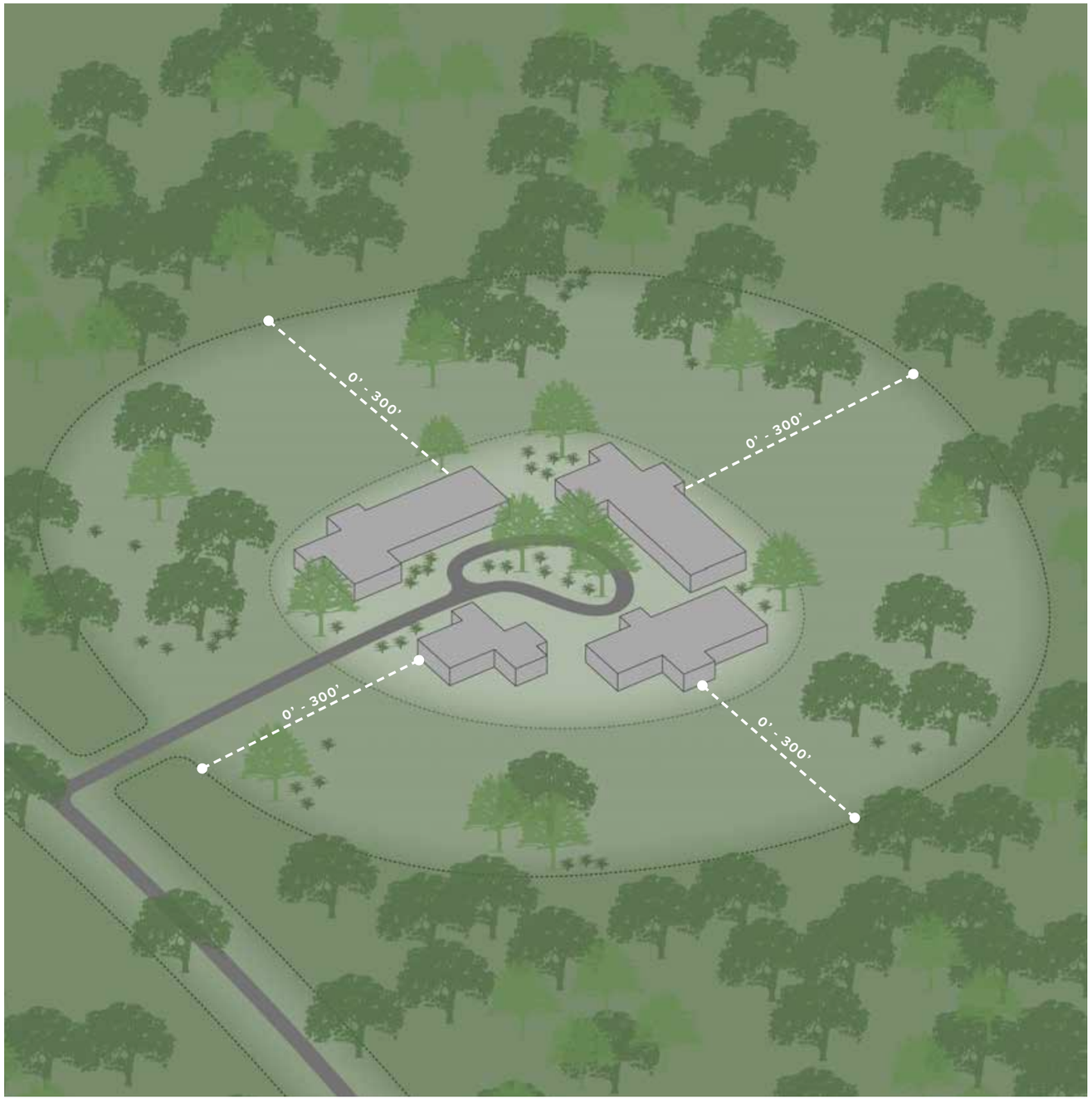
ZONE 1 REMOVE FLAMMABLE VEGETATION
0' - 30' FROM EDGE OF BUILDING

Within this zone, fire-prone vegetation will be eliminated. This includes removing all dead vegetation and removing or adequately pruning flammable shrub species. Trees will generally be pruned up to a height of 10 feet depending on species and understory conditions, with tree crowns and shrubs adequately separated to prevent fires from spreading.

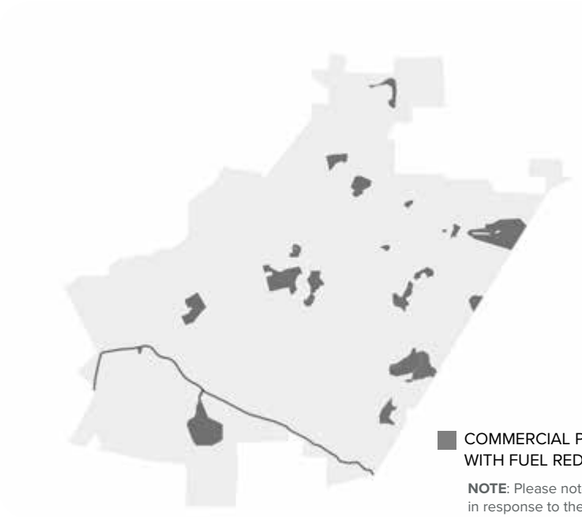
ZONE 2 REDUCE FLAMMABLE VEGETATION
30' - 100' FROM EDGE OF BUILDING

Within this zone, fire-prone vegetation will be reduced. This could include pruning branches from trees, cutting dead wood from shrubs, and mowing dried grass. In addition, individual trees or tree clusters will be adequately spaced to prevent fires from quickly spreading.

COMMERCIAL TYPICAL FUEL REDUCTION STRATEGY



COMMERCIAL PROPERTY LOCATIONS



COMMERCIAL PROPERTIES WITH FUEL REDUCTION

NOTE: Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COMMERCIAL FUEL REDUCTION ZONES

All commercial buildings—including major hotel and restaurant buildings as well as supporting amenities, such as back-of-house operational buildings—will reduce and selectively remove fire-prone vegetation within 300' from the edge of the building. This strategy is in compliance with regulations applied to commercial buildings by the Certified Unified Program Agencies (CUPA) program, as overseen by the California Environmental Protection Agency (CalEPA).

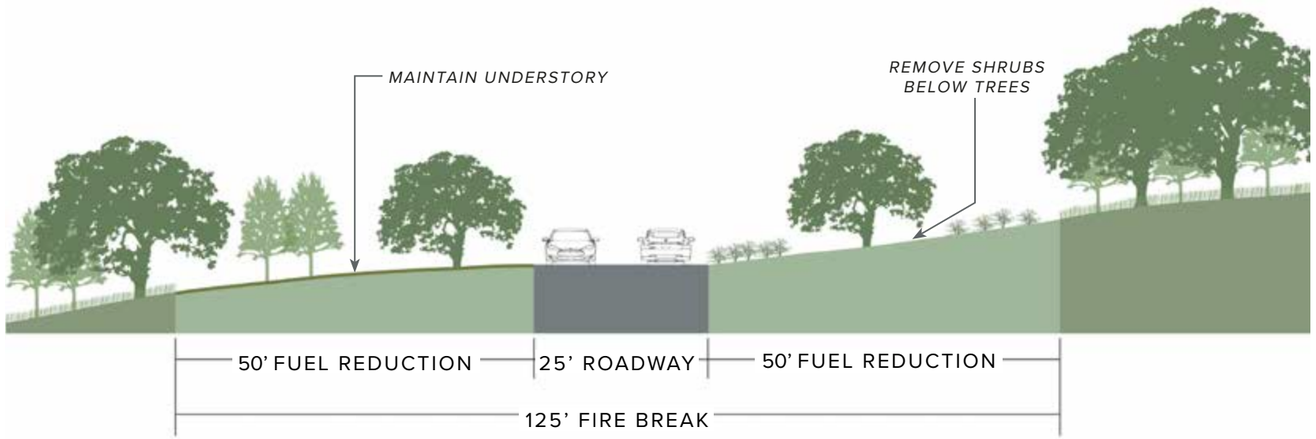
BUILDING CONSTRUCT TO WILDLAND-URBAN INTERFACE (WUI) BUILDING CODES

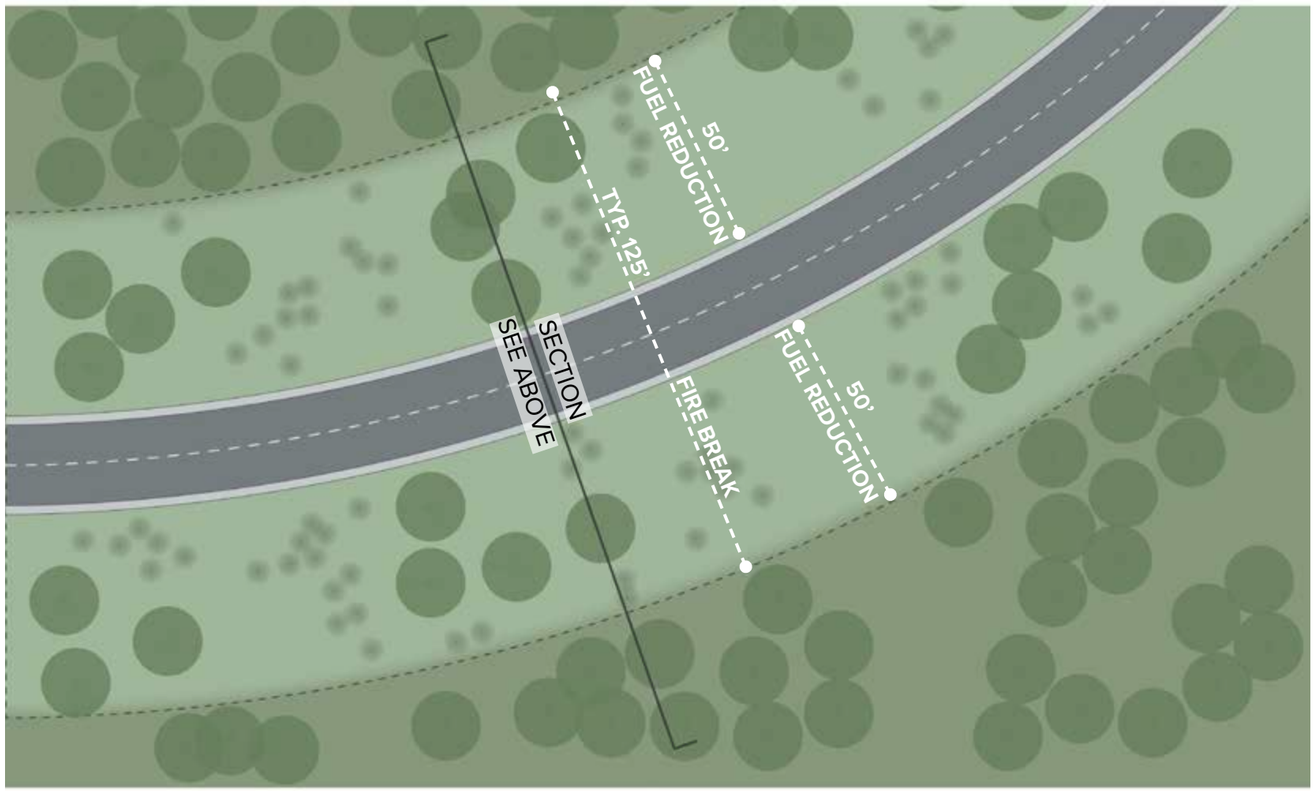
Buildings will be constructed using materials that resist ignition or sustained burning when exposed to embers and small flames from wildfire. Exterior fire sprinkler systems will be installed on all buildings with independent water connections.

FUEL REDUCTION ZONE REMOVE AND REDUCE FLAMMABLE VEGETATION
0' - 300' FROM EDGE OF BUILDING

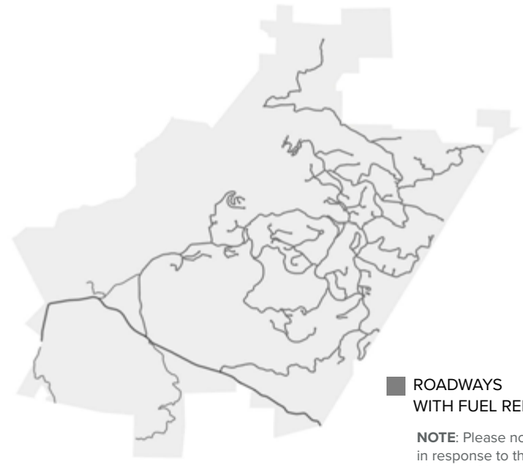
Within 300' from the edge of the building, fire-prone vegetation will be removed and reduced. This includes removing all dead vegetation and selectively removing flammable shrubs. Additional actions include pruning lower branches from trees, cutting dead wood from shrubs, and mowing dried grass. In addition, individual trees or tree clusters will be adequately spaced to prevent fires from quickly spreading.

ROADWAY TYPICAL FUEL REDUCTION & FIRE BREAK STRATEGY





ROADWAY ROUTES



ROADWAYS WITH FUEL REDUCTION

NOTE: Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

ROADWAY FUEL REDUCTION ZONES & FIRE BREAKS

Flammable vegetation will be reduced and removed within the first 50' from both edges of roadways. This strategy will create a network of fire breaks throughout the property and ensure navigable access and evacuation routes in the case of an emergency.

FUEL REDUCTION ZONE REMOVE AND REDUCE FLAMMABLE VEGETATION
0' - 50' FROM BOTH ROADWAY EDGES

Within the first 50' from the edge of the road, fire-prone vegetation will be removed and reduced. This includes cutting down dead trees and removing all flammable shrubs. The understory below trees will be maintained by mowing, grazing, and manual vegetation removal; in addition, shrubs will be removed below trees. Within this zone, individual trees or tree clusters will be adequately spaced to prevent fires from quickly spreading.

LANDSCAPE FIRE MANAGEMENT SITE PLAN

As detailed below, a variety of actions and strategies will be deployed in order to address fire concerns throughout the site. Grazing, manual vegetation removal, and irrigation will be used throughout the site's common, residential, and commercial landscapes to reduce fire risk. A network of fire breaks will be formed through a system of roadways, vineyards, and recreation fields; in addition, a property boundary fire break will also be maintained to further reduce the risk of fires from entering the site. In the case of a fire, a series of temporary refuge areas and emergency access roads will be essential in ensuring safety for residents and access for emergency personnel. A detailed fire management plan will be submitted under a separate cover

ACTIVE LANDSCAPE MANAGEMENT FUEL REDUCTION
MANUAL VEGETATION REMOVAL | GRAZING

RESIDENTIAL/COMMERCIAL FUEL REDUCTION & FIRE BREAKS
MANUAL VEGETATION REMOVAL | GRAZING | IRRIGATION |
FIRE RESILIENT BUILDING CONSTRUCTION

ROADWAY FIRE BREAKS
MANUAL VEGETATION REMOVAL | GRAZING

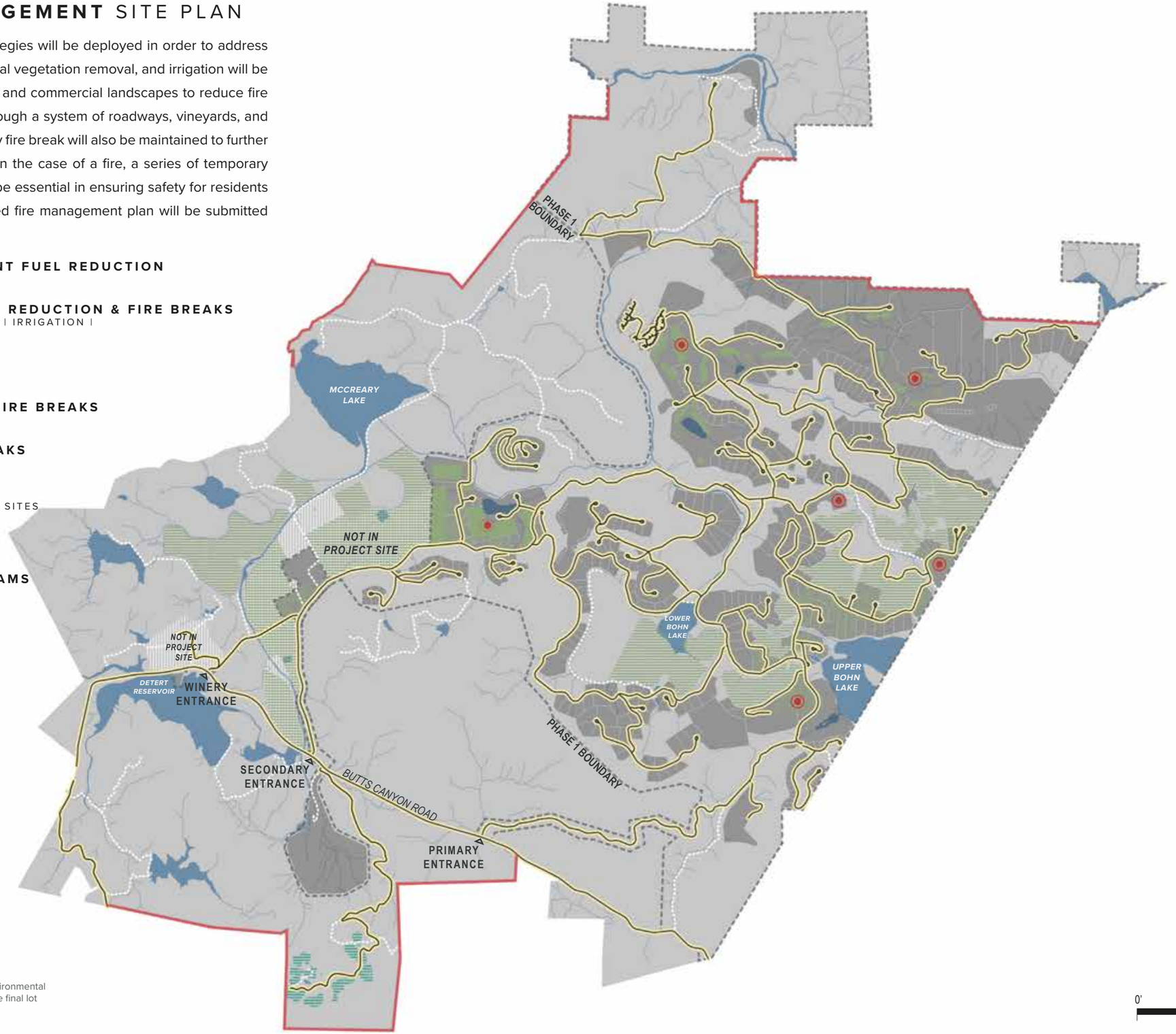
AGRICULTURAL/RECREATIONAL FIRE BREAKS
IRRIGATION

PROPERTY BOUNDARY FIRE BREAKS
MANUAL VEGETATION REMOVAL | GRAZING

TEMPORARY REFUGE AREAS
EMERGENCY GATHERING AND PROTECTION SITES

EMERGENCY ACCESS ROADS
RE-PURPOSING EXISTING RANCH ROADS

LAKES, PONDS, CREEKS, & STREAMS
WATER SOURCES AND WATERWAYS



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

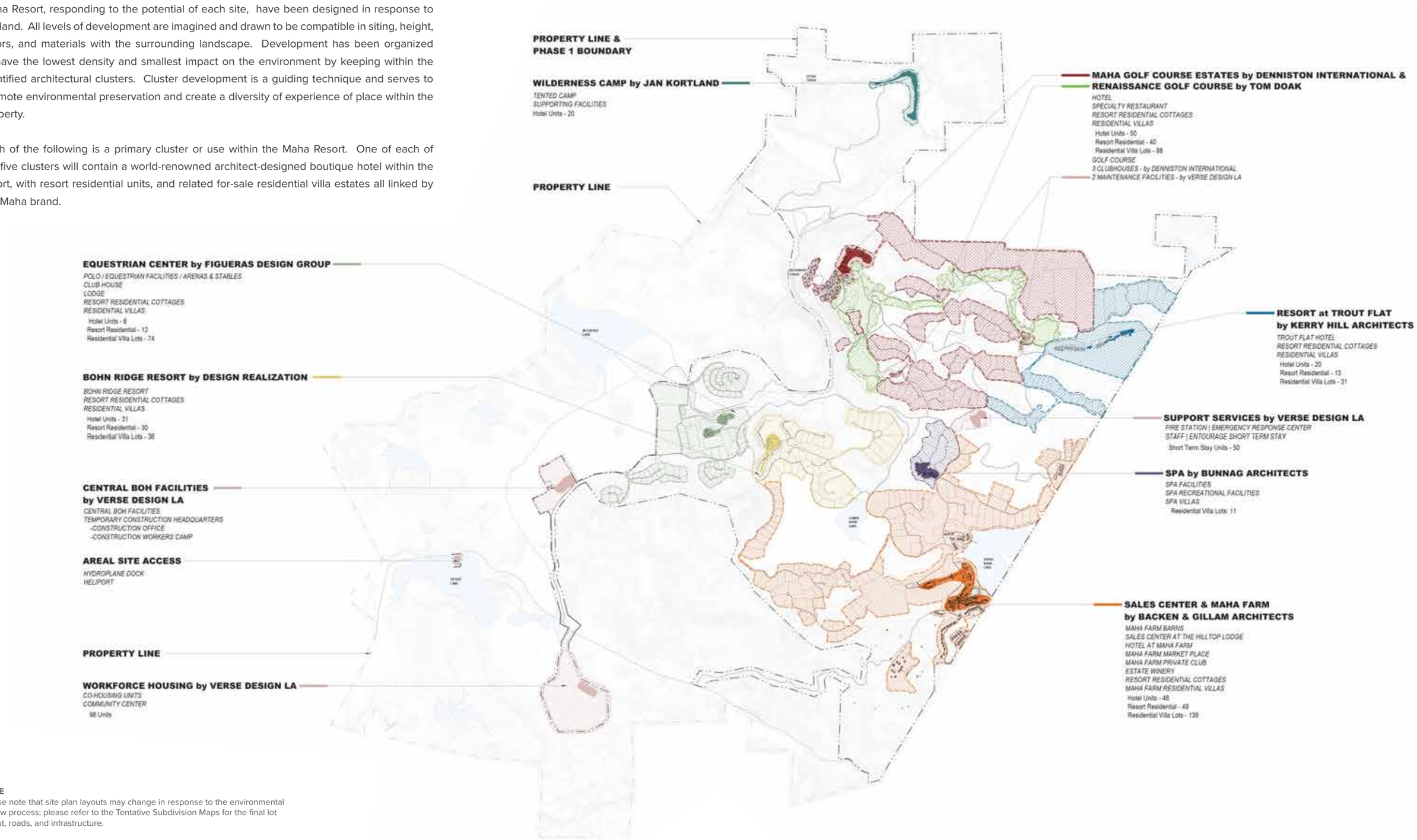
SECTION 3 ARCHITECTURE AND LAND USE PLANS

ARCHITECTURE AND LAND USE PLANS

Inspired by the existing beauty of the surrounding landscape, the architectural clusters of the Maha Resort, responding to the potential of each site, have been designed in response to the land. All levels of development are imagined and drawn to be compatible in siting, height, colors, and materials with the surrounding landscape. Development has been organized to have the lowest density and smallest impact on the environment by keeping within the identified architectural clusters. Cluster development is a guiding technique and serves to promote environmental preservation and create a diversity of experience of place within the Property.

Each of the following is a primary cluster or use within the Maha Resort. One of each of the five clusters will contain a world-renowned architect-designed boutique hotel within the resort, with resort residential units, and related for-sale residential villa estates all linked by the Maha brand.

ARCHITECTURAL CLUSTER MAP



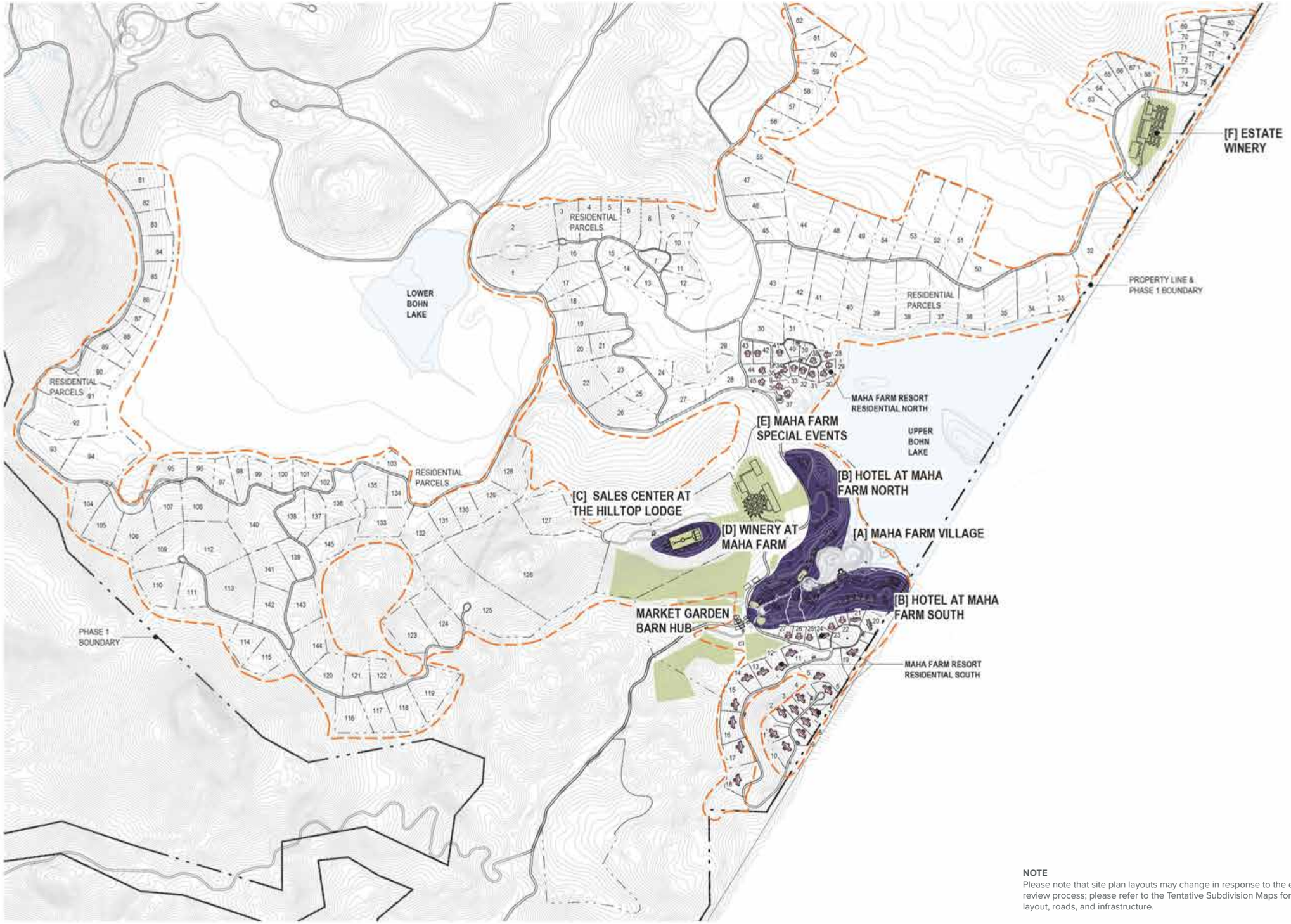
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

Maha Farm—Backen & Gillam Architects

The Maha Farm is anticipated to be the heart of Maha. The Farm is located near Upper Bohn Lake and designed in response to the naturally occurring terrain. The highest elevation of each building is one story high, even in instances where elevation is incorporated to create a two-story building accessed at grade on each level.

The Maha Farm connects visitors to the Winery, Private Club and Sales Center. Within this area locally grown foods will be promoted and showcased in gardens within and surrounding the commercial center. This is anticipated to be a hub for events, farmers markets and commercial activities such as restaurants and retail as well as artisan market experiences.

MAHA FARM LAND USE CLUSTER MAP



COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL
- AGRICULTURE

CLUSTER USES

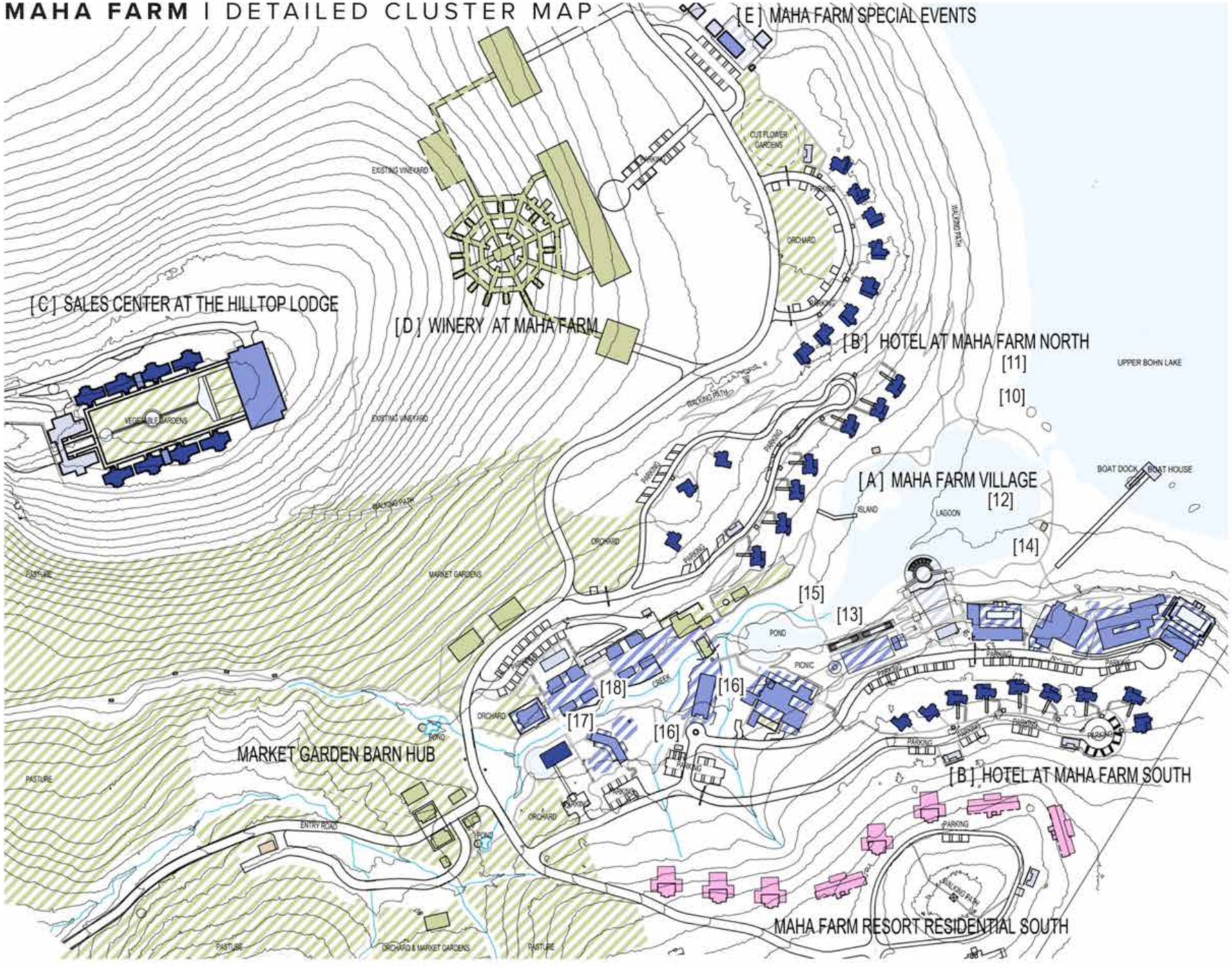
48 HOTEL UNITS
156 RESIDENTIAL VILLAS
45 RESORT RESIDENTIAL UNITS
FACILITIES
[A] MAHA FARM VILLAGE
[B] MAHA FARM HOTEL
[C] SALES CENTER
[D] WINERY
[E] SPECIAL EVENTS
[F] ESTATE WINERY

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 600' 1200' 2400'

ORIGINAL SCALE: 1" = 1200'-0"

MAHA FARM | DETAILED CLUSTER MAP



COLOR LEGEND

- AGRICULTURE- ACCESSORY
- AGRICULTURE- OUTDOOR
- RESORT- PRIMARY
- RESORT- COMMERCIAL
- RESORT- ACCESSORY
- RESORT- RESIDENTIAL
- RESORT- OUTDOOR HARDSCAPE
- RESORT - COMMERCIAL OUTDOOR HARDSCAPE
- UTILITY STRUCTURE

MAHA FARM | DETAILED CLUSTER MAP

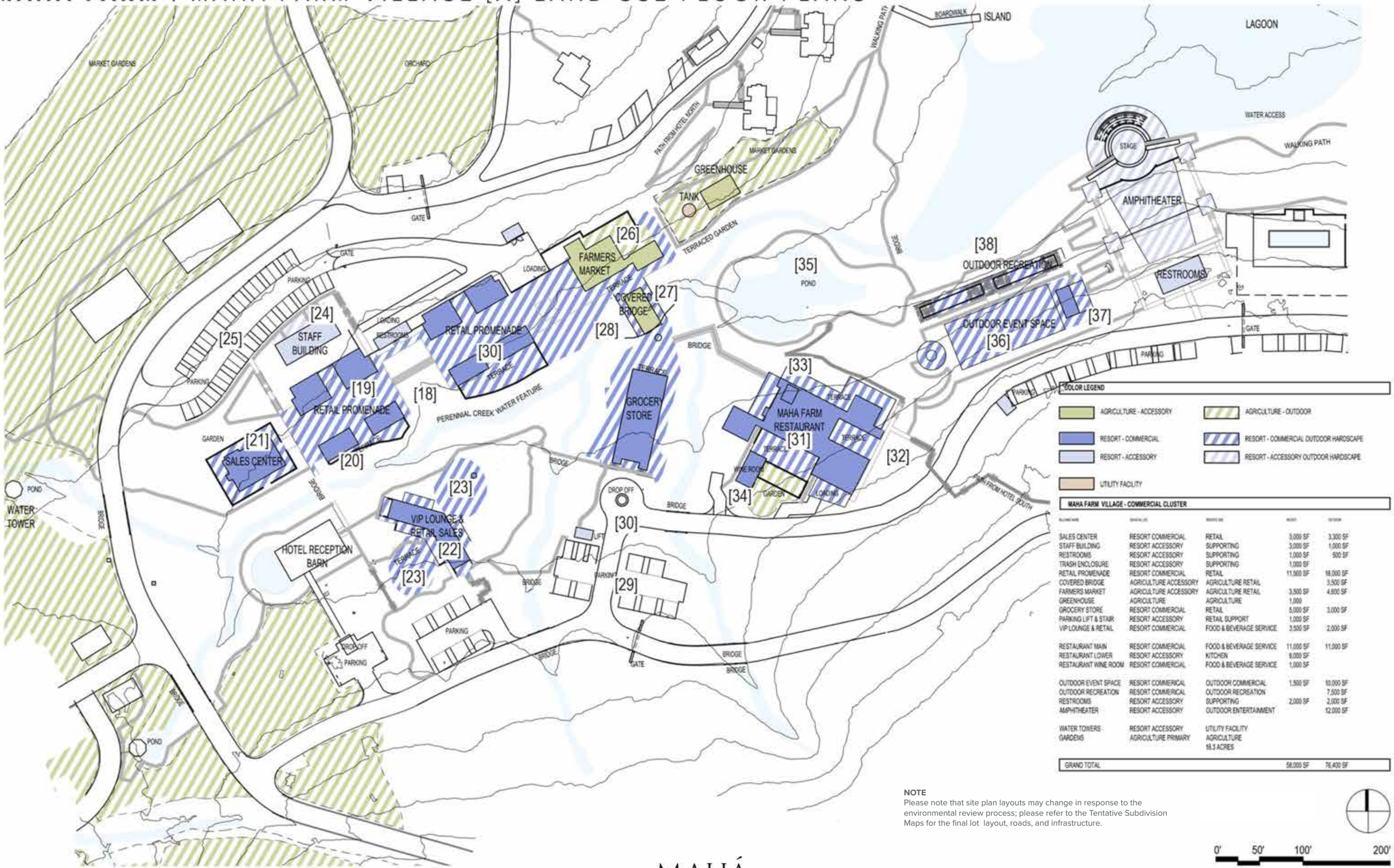
MAHA FARM MARKETPLACE

THE MAHA FARM VILLAGE [A] LIES AT THE CORE OF THE GUEST EXPERIENCE. ONLY A SHORT WALKING DISTANCE FROM THE COTTAGE HOTEL ROOMS [B], GUESTS CAN ENJOY FARM-TO-TABLE DINING IN THE RESTAURANT OR PICK UP CASUAL PICNIC SNACKS AT THE GROCERY STORE. MULTIPURPOSE PATHWAYS PROVIDE CONNECTION TO OTHER DESTINATIONS IN MAHA FARM SUCH AS THE SALES CENTER AT THE HILLTOP LODGE [C], WINERY [D] AND SPECIAL EVENTS BUILDING [E]. THE RESIDENTS CLUB IS RELOCATED AT THE EAST SIDE OF THE VILLAGE NEAR THE LAKE.

NOTE

Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 50' 100' 200'

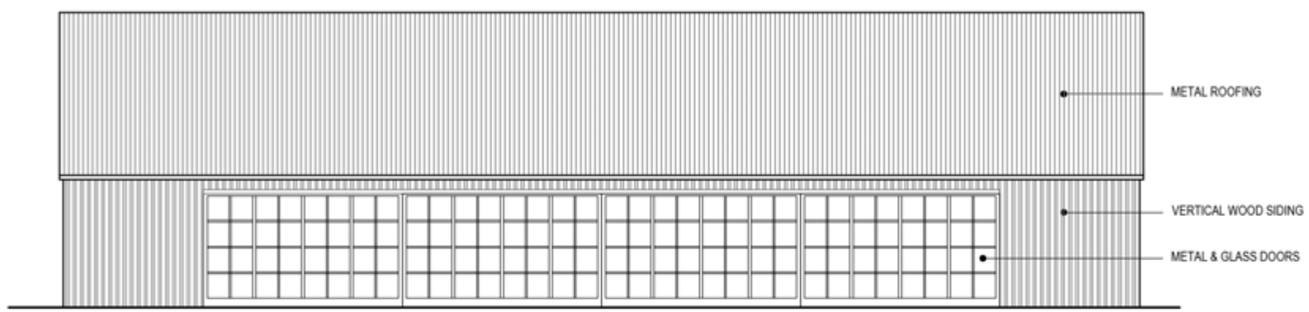


MAHA FARM VILLAGE - COMMERCIAL CLUSTER

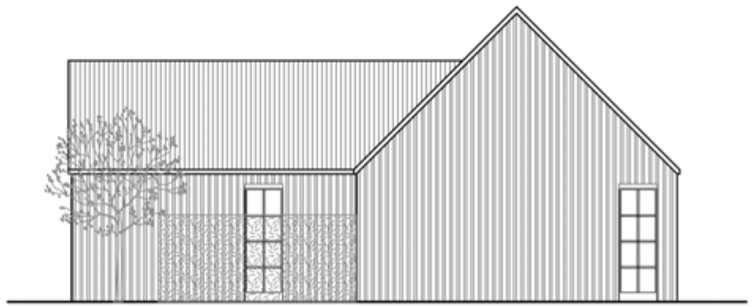
SALES CENTER	RESORT COMMERCIAL	RETAIL	3,000 SF	3,300 SF
STAFF BUILDING	RESORT ACCESSORY	SUPPORTING	3,000 SF	1,000 SF
RESTROOMS	RESORT ACCESSORY	SUPPORTING	1,000 SF	500 SF
TRASH ENCLOSURE	RESORT ACCESSORY	SUPPORTING	1,000 SF	
RETAIL PROMENADE	RESORT COMMERCIAL	RETAIL	11,000 SF	16,000 SF
COVERED BRIDGE	AGRICULTURE ACCESSORY	AGRICULTURE RETAIL		3,500 SF
FARMERS MARKET	AGRICULTURE ACCESSORY	AGRICULTURE RETAIL	3,500 SF	4,600 SF
GREENHOUSE	AGRICULTURE	AGRICULTURE	1,000	
GROCERY STORE	RESORT COMMERCIAL	RETAIL	5,000 SF	3,000 SF
PARKING LIFT & STAIR	RESORT ACCESSORY	RETAIL SUPPORT	1,000 SF	
VIP LOUNGE & RETAIL	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	3,500 SF	2,000 SF
RESTAURANT MAIN	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	11,000 SF	11,000 SF
RESTAURANT LOWER	RESORT ACCESSORY	KITCHEN	9,000 SF	
RESTAURANT WINE ROOM	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	1,000 SF	
OUTDOOR EVENT SPACE	RESORT COMMERCIAL	OUTDOOR COMMERCIAL	1,500 SF	10,000 SF
OUTDOOR RECREATION	RESORT COMMERCIAL	OUTDOOR RECREATION		7,500 SF
RESTROOMS	RESORT ACCESSORY	SUPPORTING	2,000 SF	2,000 SF
AMPHITHEATER	RESORT ACCESSORY	OUTDOOR ENTERTAINMENT		12,000 SF
WATER TOWERS	RESORT ACCESSORY	UTILITY FACILITY		
GARDENS	AGRICULTURE PRIMARY	AGRICULTURE 18.3 ACRES		
GRAND TOTAL			58,000 SF	76,400 SF

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

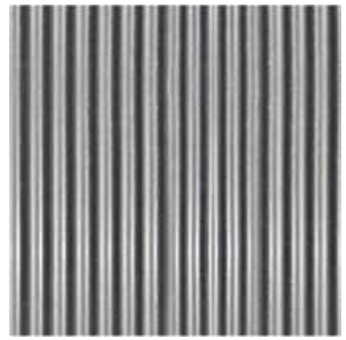
0' 50' 100' 200'



FRONT ELEVATION



SIDE ELEVATION

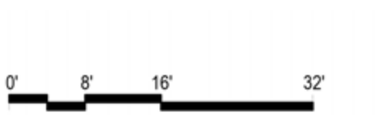


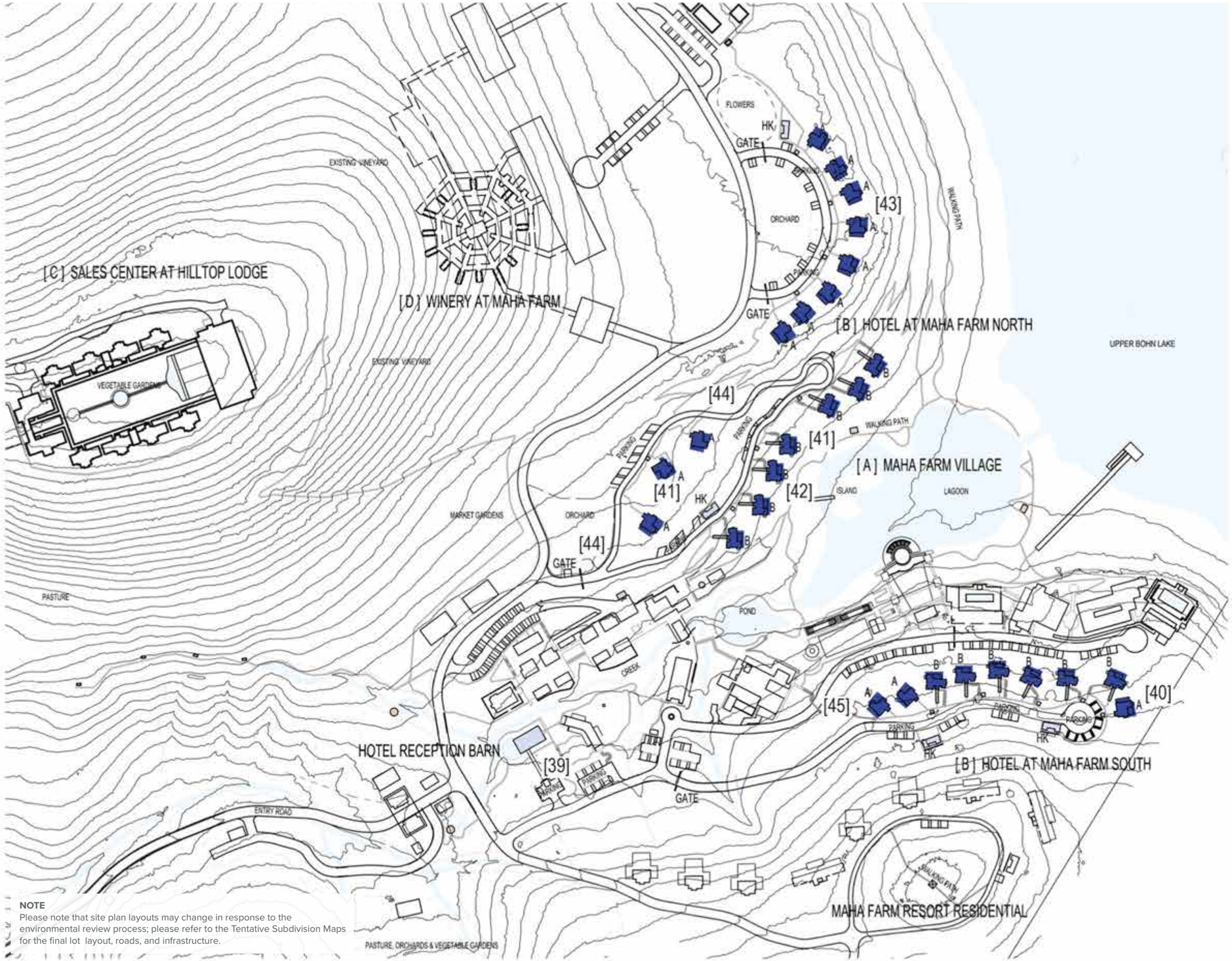
METAL ROOF

VERTICAL WOOD SIDING

BOARDFORM CONCRETE

EXTERIOR STONE SURFACE





NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

- RESORT- PRIMARY
- RESORT- UTILITY
- RESORT- ACCESSORY

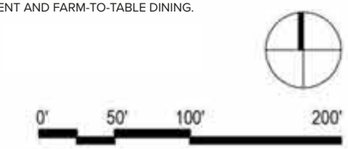
HOTEL AT MAHA FARM

BUILDING NAME	GENERAL USE	SPECIFIC USE	INDOOR	OUTDOOR
RECEPTION BARN MAIN	RESORT ACCESSORY	RESORT MANAGEMENT	2,000 SF	1,500 SF
RECEPTION BARN LOWER	RESORT ACCESSORY	RESORT MANAGEMENT	3,000 SF	
HOTEL ROOM A COTTAGES	RESORT PRIMARY	HOTEL UNIT	1,400 SF x 14 = 19,600 SF	1,300 SF x 14 = 18,200 SF
HOTEL ROOM B COTTAGES UPPER	RESORT PRIMARY	HOTEL UNIT	1,500 SF x 13 = 19,500 SF	1,000 SF x 13 = 13,000 SF
HOTEL ROOM B COTTAGES LOWER	RESORT PRIMARY	HOTEL UNIT	1,500 SF x 13 = 19,500 SF	400 SF x 13 = 5,200 SF
HOTEL ROOM C COTTAGES	DELETED			
HK HOUSEKEEPING	RESORT ACCESSORY	SUPPORTING	800 SF x 4 = 3,200 SF	500 SF X 4 = 2,000 SF
GATE	RESORT ACCESSORY	SUPPORTING	000 SF	
GRAND TOTAL			66,800 SF	39,900 SF

MAHA FARM | MAHA FARM HOTEL LAND USE FLOOR PLANS

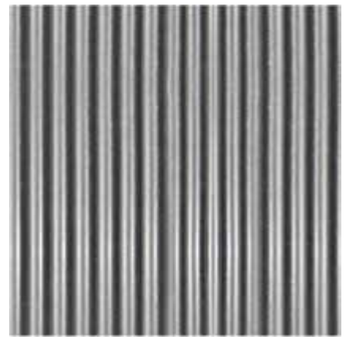
MAHA FARM HOTEL

GUESTS WILL ARRIVE AT THE HOTEL RECEPTION BARN AND BE VALETED TO THEIR INDIVIDUAL HOTEL COTTAGE. TWO TYPES OF COTTAGES ARE PLANNED: COTTAGE 'A' IS A ONE STORY WITH A TRADITIONAL PITCHED ROOF IN A VERNACULAR STYLE. COTTAGE 'B' IS A TWO STORY PITCHED ROOF STRUCTURE WITH LANDSCAPE STEPS TO THE LOWER UNIT AND FOOT BRIDGES TO THE UPPER UNITS. GUESTS WILL BE SHUTTLED FROM THEIR HOTEL ROOMS TO OTHER AREAS OF THE MAHA RESORT FOR RECREATION, ENTERTAINMENT AND FARM-TO-TABLE DINING.



FRONT ELEVATION

SIDE ELEVATION

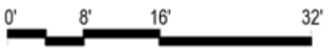


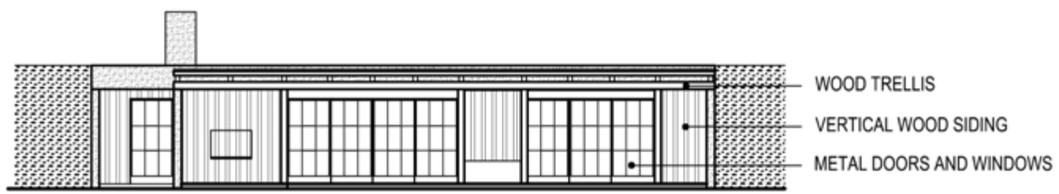
METAL ROOF

VERTICAL WOOD SIDING

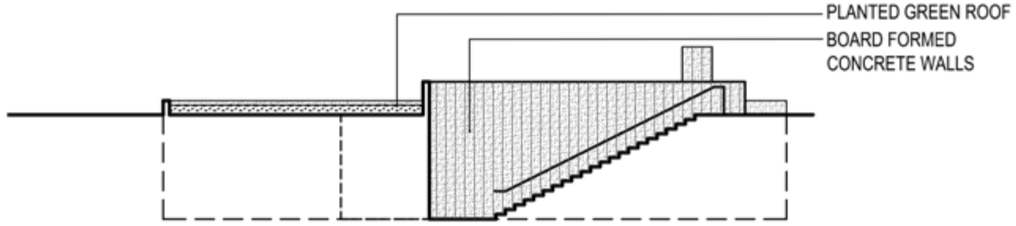
BOARDFORM CONCRETE

EXTERIOR STONE SURFACE





FRONT ELEVATION



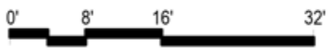
SIDE ELEVATION

GREEN ROOF

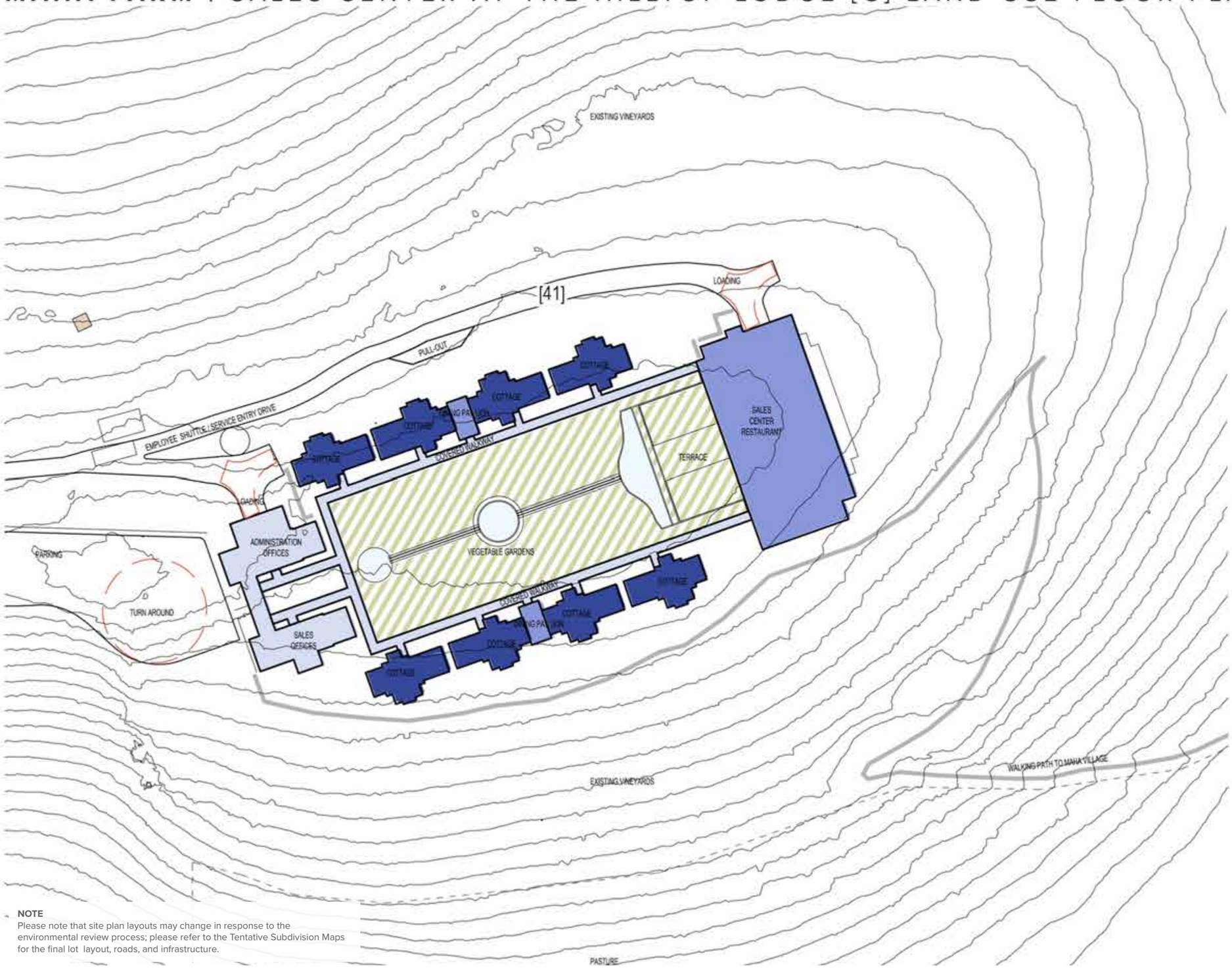
VERTICAL WOOD SIDING

BOARDFORM CONCRETE

EXTERIOR STONE SURFACE



MAHA FARM | SALES CENTER AT THE HILLTOP LODGE [C] LAND USE FLOOR PLANS



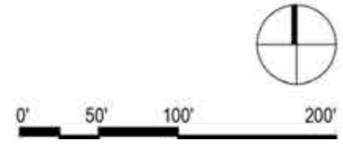
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

- RESORT- PRIMARY
- RESORT- COMMERCIAL
- RESORT- ACCESSORY
- AGRICULTURE- OUTDOOR
- UTILITY FACILITY

SALES CENTER AT THE HILLTOP LODGE

SALES OFFICES	RESORT ACCESSORY	MANAGEMENT	4,000 SF	1,000 SF
ADMIN OFFICES MAIN	RESORT ACCESSORY	MANAGEMENT	5,000 SF	1,000 SF
ADMIN OFFICES LOWER	RESORT ACCESSORY	MANAGEMENT	3,600 SF	
DINING PAVILION	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	600 SF	200 SF
DINING PAVILION	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	600 SF	200 SF
COTTAGES	RESORT PRIMARY	HOTEL UNIT	1,725 SF X 8 = 13,800 SF	10,000 SF
RESTAURANT MAIN	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	13,000 SF	5,000 SF
RESTAURANT LOWER	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	12,500 SF	1,500 SF
COVERED WALKWAY	RESORT ACCESSORY	SUPPORTING FACILITY		9,600 SF
FUNICULAR 1	RESORT ACCESSORY	SUPPORTING FACILITY		6,500 SF
VEGETABLE GARDENS	AGRICULTURE PRIMARY	AGRICULTURE 1.2 ACRES		
GRAND TOTAL			53,100 SF	35,000 SF



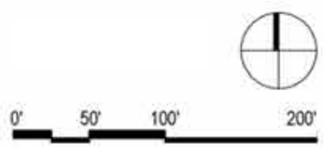
MAHA FARM | WINERY AT MAHA FARM [D] LAND USE FLOOR PLANS

COLOR LEGEND

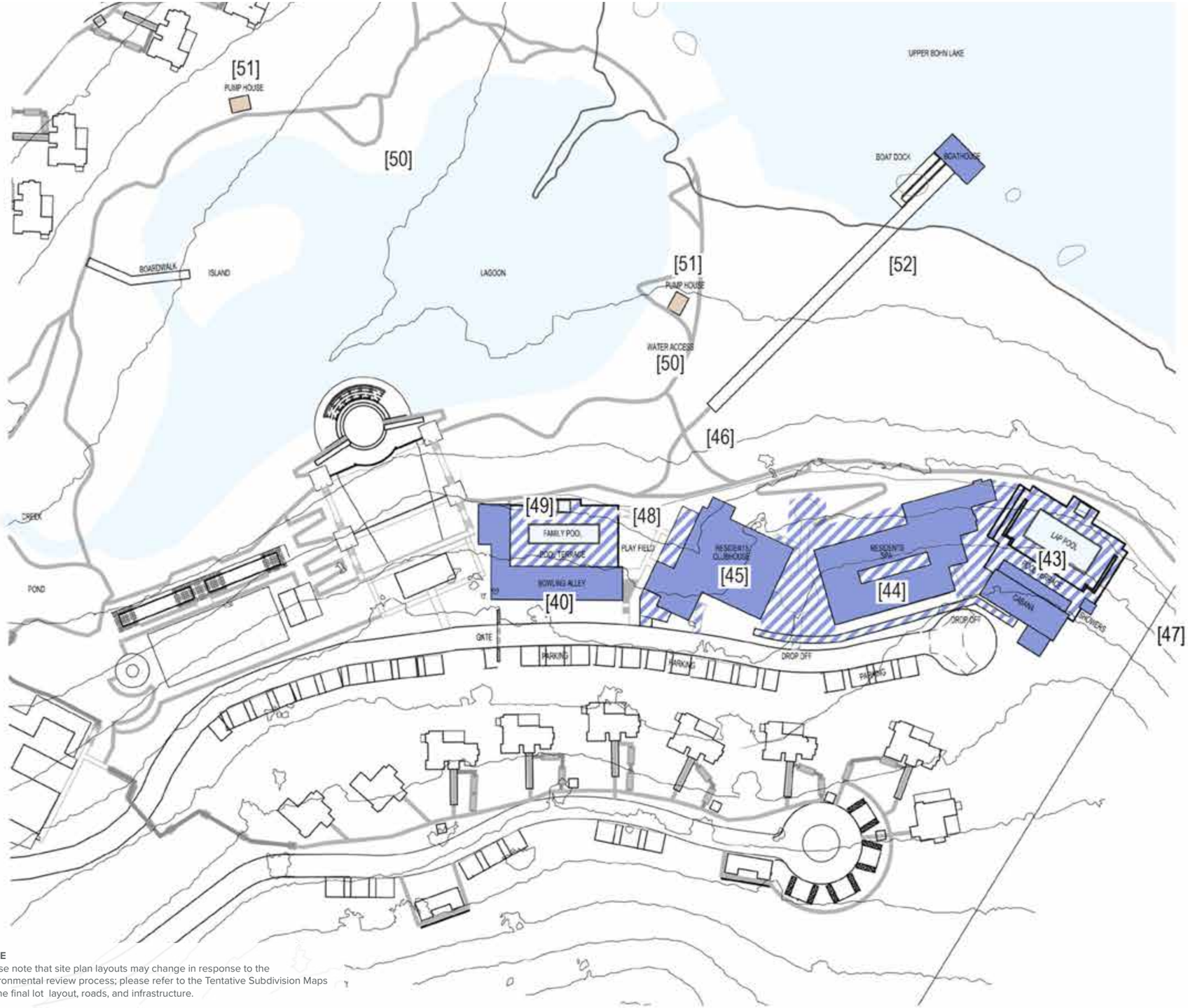
AGRICULTURE- ACCESSORY

WINERY AT MAHA FARM

WINERY 1 1ST	AGRICULTURE ACCESSORY	WINERY	20,000 SF	6,000 SF
WINERY 1 2ND	AGRICULTURE ACCESSORY	WINERY	6,000 SF	4,000 SF
WINERY 1 3RD	AGRICULTURE ACCESSORY	WINERY	3,000 SF	8,000 SF
WINERY 2	AGRICULTURE ACCESSORY	WINERY	11,000 SF	
CAVES	AGRICULTURE ACCESSORY	WINERY	50,000 SF	
MECHANICAL	AGRICULTURE ACCESSORY	WINERY	6,000 SF	
VINEYARDS	AGRICULTURE PRIMARY	AGRICULTURE		
GRAND TOTAL			98,000 SF	18,000 SF



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

RESORT- COMMERCIAL

RESORT- COMMERCIAL OUTDOOR HARDSCAPE

MAHA FARM RESIDENTS CLUB

CABANA	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	3,500 SF	1,000 SF
LAP POOL	RESORT COMMERCIAL	OUTDOOR RECREATION		9,000 SF
SHOWERS	RESORT COMMERCIAL	OUTDOOR RECREATION	1,000 SF	
COVERED WALKWAY	RESORT COMMERCIAL	SUPPORTING		6,000 SF
RESIDENTS CLUB SPA	RESORT COMMERCIAL	INDOOR RECREATION	12,000 SF	2,000 SF
CLUBHOUSE MAIN	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	12,000 SF	6,000 SF
CLUBHOUSE LOWER	RESORT COMMERCIAL	INDOOR ENTERTAINMENT	12,000 SF	1,000 SF
BOWLING	RESORT COMMERCIAL	INDOOR RECREATION	7,000 SF	1,200 SF
FAMILY POOL	RESORT COMMERCIAL	OUTDOOR RECREATION		6,000 SF
BOATHOUSE	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	4,000 SF	
BOAT DOCK	RESORT ACCESSORY	OUTDOOR RECREATION		
WATER ACCESS	RESORT ACCESSORY	OUTDOOR RECREATION		10,000 SF
PLAY FIELD	RESORT ACCESSORY	OUTDOOR RECREATION		15,000 SF
PUMP HOUSES	UTILITY	SUPPORTING	4,000 SF	
GRAND TOTAL			65,500 SF	80,200 SF

MAHA FARM | MAHA FARM RESIDENTS CLUB LAND USE FLOOR PLANS

MAHA FARM RESIDENTS' CLUB

RESIDENTS CAN ENJOY RECREATIONAL COMMUNITY ACTIVITIES IN THE CLUBHOUSE, BOWLING ALLEY AND BOATHOUSE AT THE MAHA FARM PRIVATE RESIDENTS CLUB. THE CLUBHOUSE AND SWIMMING POOL TERRACE OVERLOOK UPPER BOHN LAKE. A PATHWAY AND BOARDWALK CREATES ACCESS FROM THE EMBANKMENT DOWN TO A FIXED ELEVATION BOATHOUSE AND FLOATING DOCKS ON THE LAKE.

0' 50' 100' 200'

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

RESORT- COMMERCIAL	AGRICULTURE-OUTDOOR
RESORT- ACCESSORY	RESORT- OUTDOOR HARDSCAPE

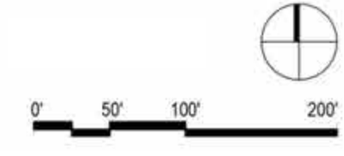
MAHA FARM SPECIAL EVENTS CENTER

SPECIAL EVENTS BUILDING	RESORT COMMERCIAL	FOOD & BEVERAGE SERVICE	3,000 SF	30,000 SF
SUPPORT BUILDING 1	RESORT ACCESSORY	FOOD & BEVERAGE SERVICE	1,500 SF	
SUPPORT BUILDING 2	RESORT ACCESSORY	FOOD & BEVERAGE SERVICE	1,500 SF	
SUPPORT BUILDING 3	RESORT ACCESSORY	FOOD & BEVERAGE SERVICE	500 SF	
SUPPORT BUILDING 4	RESORT ACCESSORY	FOOD & BEVERAGE SERVICE	500 SF	
SUPPORT BUILDING 5	RESORT ACCESSORY	FOOD & BEVERAGE SERVICE	1,500 SF	
GRAND TOTAL			8,500 SF	30,000 SF

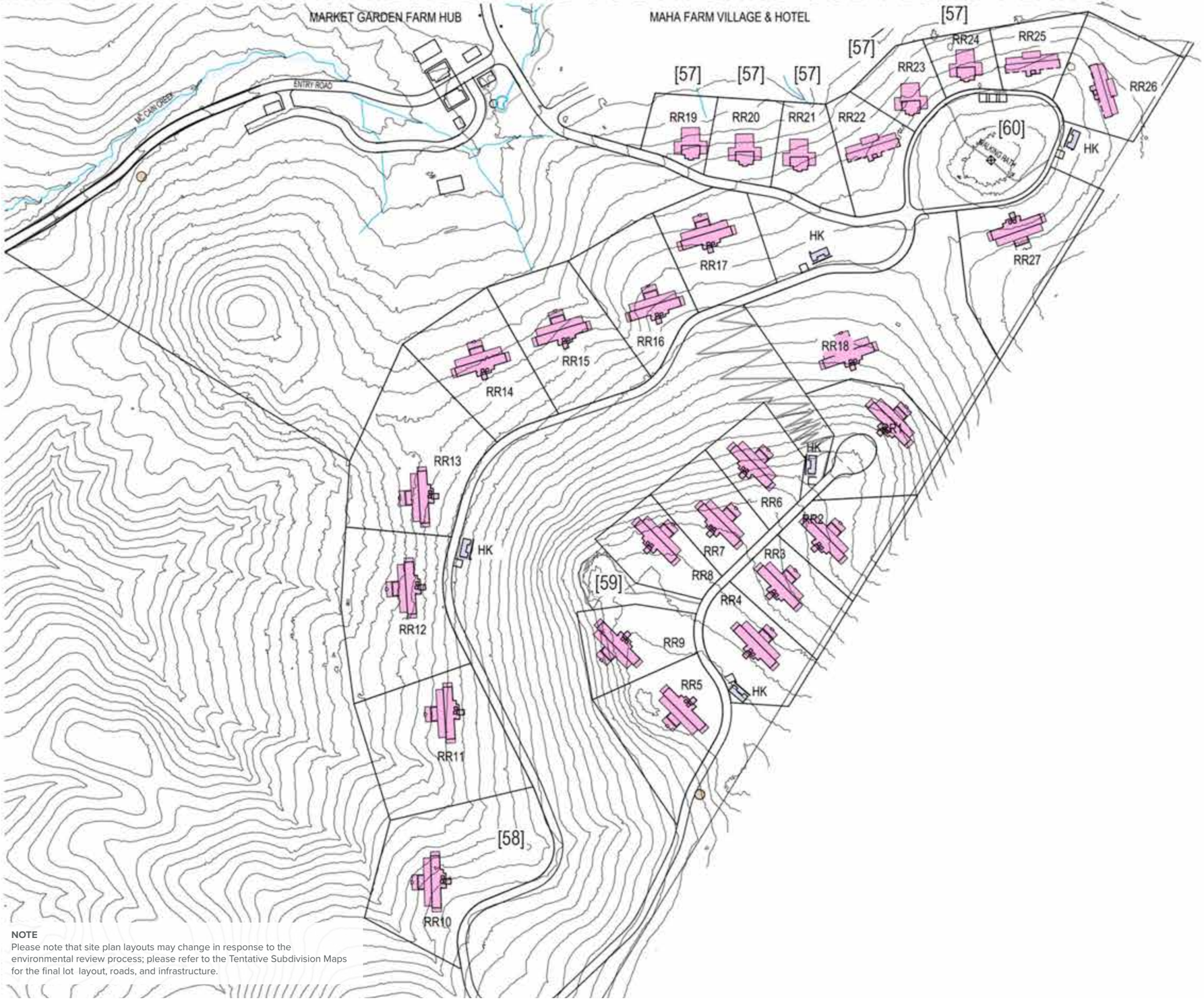
MAHA FARM | MAHA FARM SPECIAL EVENTS [E] LAND USE FLOOR PLANS

MAHA FARM SPECIAL EVENTS

THE SPECIAL EVENTS CENTER [E] WILL CREATE AN AREA FOR EVENTS SUCH AS WEDDINGS AND PARTIES. THE SITE WILL FEATURE A LARGE SHADY OUTDOOR TERRACE FOR GATHERINGS. CUT FLOWERS WILL BE CULTIVATED NEARBY TO ENHANCE HABITAT FOR THREATENED BUTTERFLIES AND OTHER POLLINATORS. STORMWATER FROM CULTIVATED AREAS WILL BE APPROPRIATELY RETAINED AND TREATED. AN OLD RANCH ROAD WILL BE USED AS A WALKING TRAIN FROM THE HOTEL COTTAGES TO THE OUTDOOR EVENTS CENTER.



MAHA FARM | RESORT RESIDENTIAL SOUTH LAND USE FLOOR PLANS



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

- RESORT- ACCESSORY
- RESORT- UTILITY
- RESORT- RESIDENTIAL

MAHA FARM RESORT RESIDENTIAL PROGRAM - SOUTH

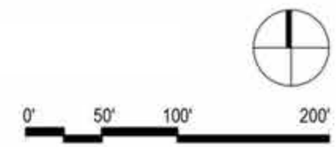
BUILDING NAME	ZONING USE	SPECIFIC USE	AMOUNT	SUBTOTAL
RESORT RESIDENTIAL UNITS: RR 1-27	RESORT PRIMARY	RESORT RESIDENTIAL UNIT	3,300 SF x 27 = 89,100 SF	3,300 SF X 27 = 89,100 SF
HK HOUSEKEEPING	RESORT ACCESSORY	SUPPORTING FACILITY	1,100 SF x 5 = 5,500 SF	
GRAND TOTAL			94,600 SF	89,100 SF

FINAL LAYOUT OF BUILDINGS & IMPROVEMENTS ON RESIDENTIAL LOTS TO BE CONFIRMED AT BUILDING PERMIT.

MAHA FARM | RESORT RESIDENTIAL SOUTH LAND USE FLOOR PLANS

MAHA FARM RESORT RESIDENTIAL SOUTH

THIRTY THREE RESORT RESIDENTIAL VILLAS WITH GREEN PLANTED ROOFS AND PEACEFUL VISTAS OF THE RESORT PROPERTY ARE PLANNED SOUTH OF THE MAHA FARM MARKETPLACE & HOTEL. EACH VILLA HAS LIVING SPACE THAT INCLUDES A KITCHEN WITH TWO BEDROOMS AND TWO BATHROOMS. OUTDOOR AMENITIES INCLUDE A SWIMMING POOL FOR EACH RESIDENTIAL RESORT UNIT.



MAHA FARM | RESORT RESIDENTIAL NORTH LAND USE FLOOR PLANS

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND				
RESORT- ACCESSORY				
RESORT- RESIDENTIAL				

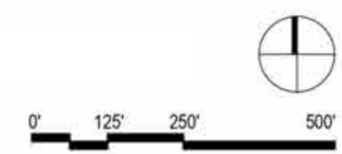
MAHA FARM RESORT RESIDENTIAL PROGRAM - NORTH				
RESORT RESIDENTIAL UNITS RR28-45	RESORT PRIMARY	RESORT RESIDENTIAL UNIT	3,300 SF x 18 = 59,400 SF	4,400 SF X 18 = 79,200 SF
HK HOUSEKEEPING	RESORT ACCESSORY	SUPPORTING FACILITY	700 SF x 3 = 2,100 SF	
GRAND TOTAL			61,500 SF	79,200 SF

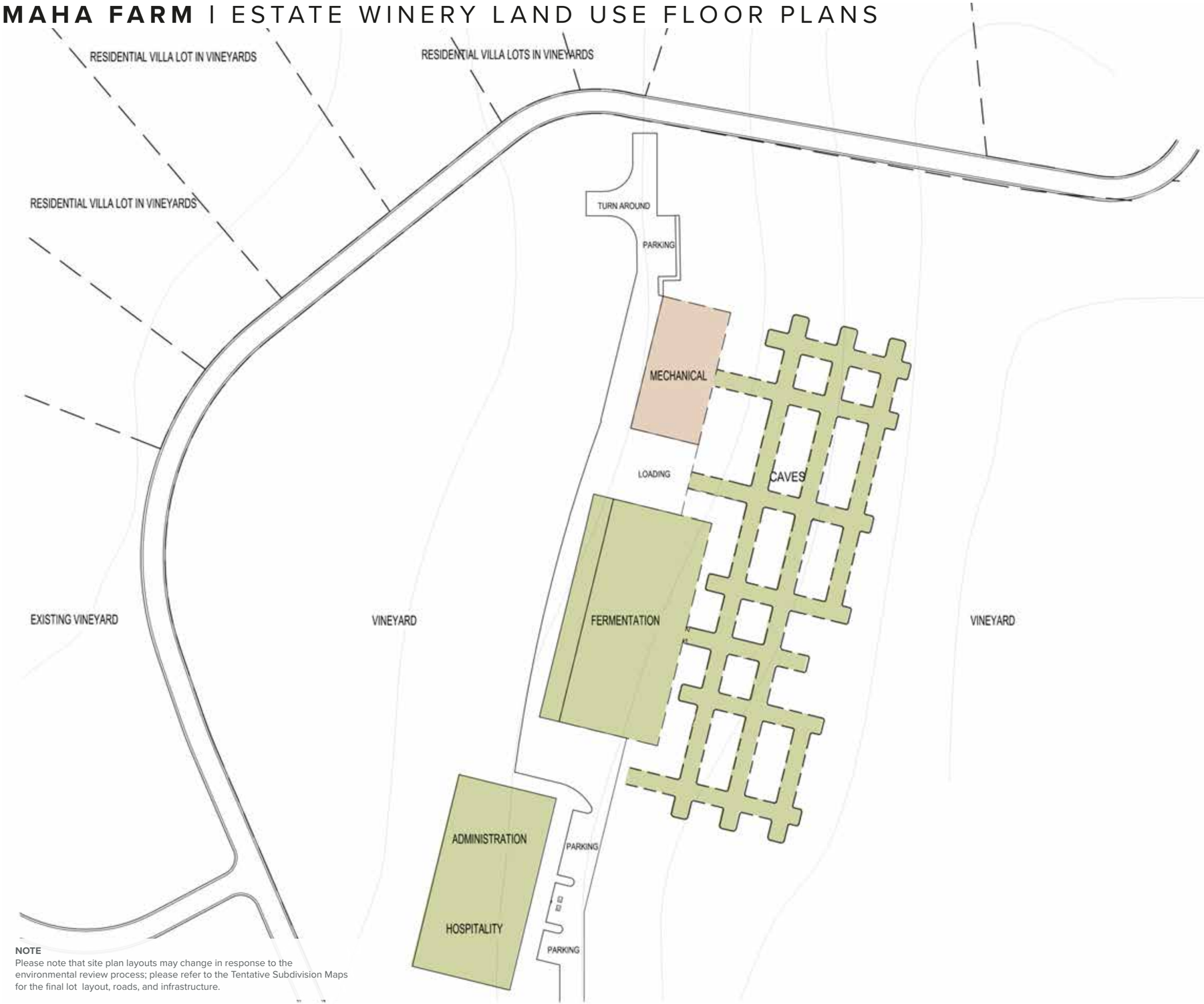
FINAL LAYOUT OF BUILDINGS & IMPROVEMENTS ON RESIDENTIAL LOTS TO BE CONFIRMED AT BUILDING PERMIT.

MAHA FARM | RESORT RESIDENTIAL NORTH LAND USE FLOOR PLANS

MAHA FARM RESORT RESIDENTIAL NORTH

FOURTEEN RESORT RESIDENTIAL VILLAS WITH GREEN PLANTED ROOFS AND PEACEFUL VISTAS OF UPPER BOHN LAKE ARE PLANNED NORTH OF THE MAHA FARM MARKETPLACE & HOTEL. EACH VILLA HAS LIVING SPACE THAT INCLUDES A KITCHEN WITH TWO BEDROOMS AND TWO BATHROOMS. OUTDOOR AMENITIES INCLUDE A SWIMMING POOL FOR EACH RESIDENTIAL RESORT UNIT.





NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

- AGRICULTURE- ACCESSORY
- UTILITY STRUCTURE

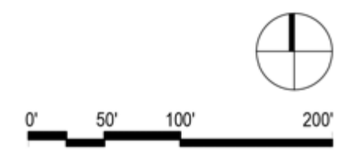
ESTATE WINERY

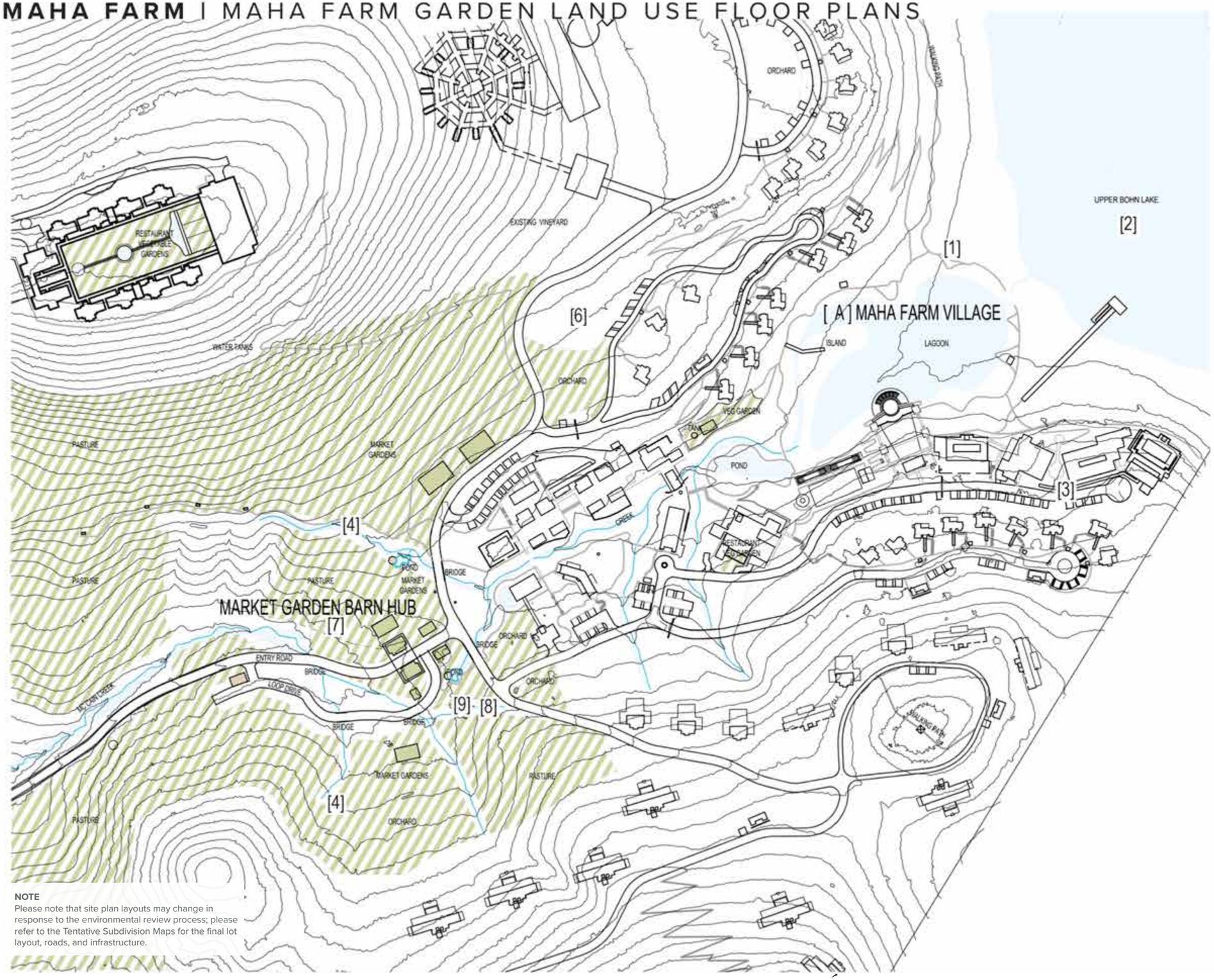
BUILDING NAME	GENERAL USE	SPECIFIC USE	INDOOR	OUTDOOR
FERMENTATION	AGRICULTURE ACCESSORY	WINERY	28,200 SF	
CAVES	AGRICULTURE ACCESSORY	WINERY	35,000 SF	
MECHANICAL	AGRICULTURE ACCESSORY	UTILITY	4,000 SF	1,800 SF
HOSPITALITY	AGRICULTURE ACCESSORY	WINERY	5,000 SF	9,000 SF
ADMINISTRATION	AGRICULTURE ACCESSORY	WINERY	5,000 SF	
GRAND TOTAL			77,200 SF	10,800 SF

MAHA FARM | ESTATE WINERY LAND USE FLOOR PLANS

ESTATE WINERY

GUESTS CAN ENJOY THE FRUITS OF THE PRODUCTIVE VINEYARDS SURROUNDING THIS SMALL BOUTIQUE WINERY. MULTIPLE LEVELS ALLOW INDOOR AND OUTDOOR WINE TASTINGS PAIRED WITH FOOD GROWN IN THE MAHA FARM ORCHARDS AND GARDENS. FOOD AND WINE HOSPITALITY IS ALSO ENVISIONED IN ROOMS CARVED FROM THE BARREL STORAGE CAVES. A FUNICULAR ALLOWS GUESTS VISITING THE SALES CENTER AT THE HILLTOP LODGE TO EASILY ACCESS THE WINERY.





NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

AGRICULTURE- OUTDOOR | AGRICULTURE- ACCESSORY

MAHA FARM VEGETABLE GARDENS & ORCHARDS

MAHA RESTAURANT VEGETABLE GARDENS	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	1.5 ACRES
MARKET GARDEN BARN HUB	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	7.3 ACRES
ORCHARD	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	3.8 ACRES
ANIMAL PASTURES	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	40 ACRES
FLOWER GARDENS	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	0.8 ACRES
SALES CENTER VEGETABLE GARDENS	AGRICULTURE PRIMARY	AGRICULTURE	000 SF	1.2 ACRES
GRAND TOTAL			000 SF	up to 54.6 ACRES

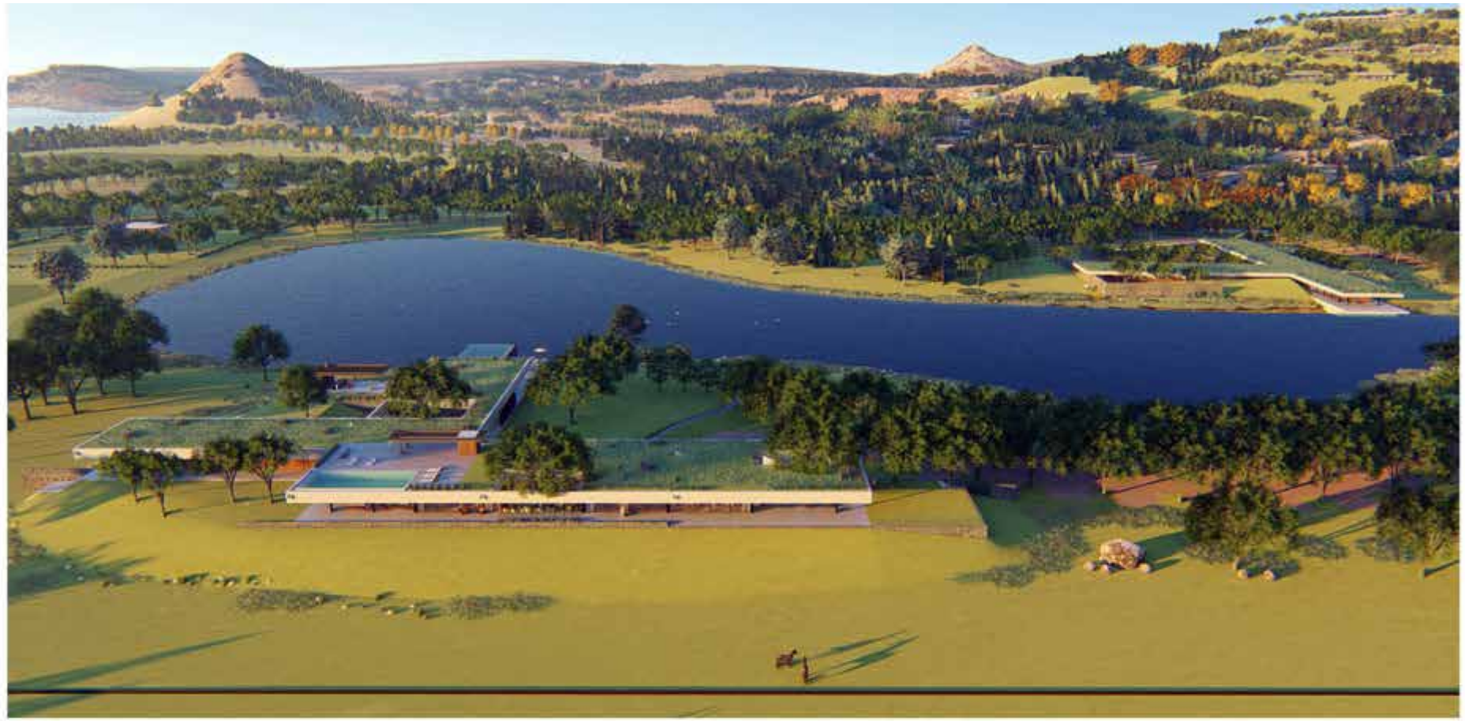
MAHA FARM | MAHA FARM SPECIAL EVENTS BUILDING

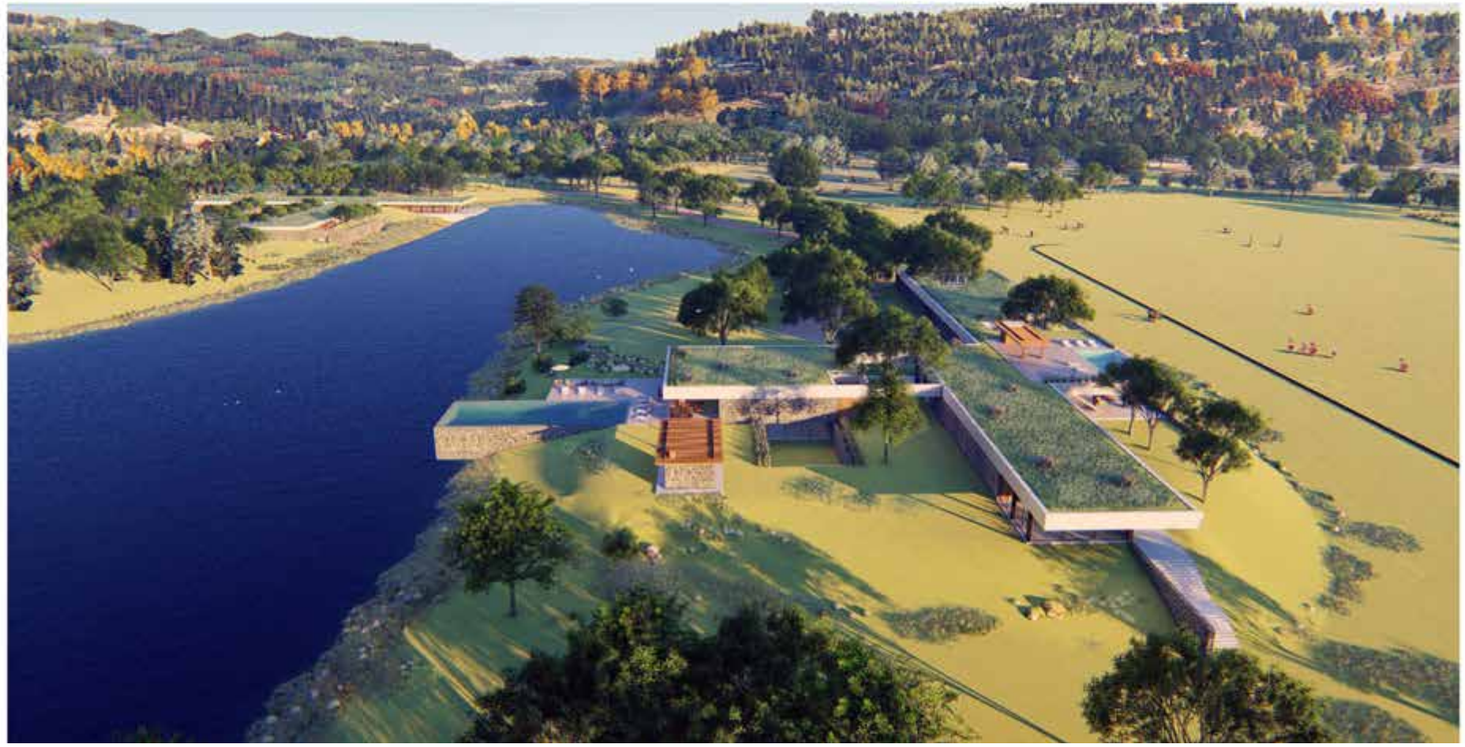
MAHA FARM GARDEN

THE FARM-TO-TABLE CONCEPT FOR THE RESTAURANTS AND HOTEL SERVICE OFFERED BY THE RESORT IS SUPPORTED BY EXTENSIVE VEGETABLE GARDENS, CULTIVATED NATIVE PLANT FORAGING AREAS AND FRUIT & NUT ORCHARDS LOCATED IN MAHA FARM. THE PRODUCTIVE GROWING AREAS ARE LOCATED IN AND AROUND THE VILLAGE, CENTERED ON THE MARKET GARDEN BARN HUB, AS WELL AS A SHOWCASE RESTAURANT GARDEN AT THE HILLTOP LODGE.

LRR 4/27/2020

0' 125' 250' 500'





Equestrian–Figueras Design Group

Redesigning a historical use within the Guenoc Valley required a respectful and honest dialogue between the current and proposed architecture to include world class equestrian facilities and stables as well as the Lodge for social activities. The equestrian area will be centered on the element of water. The buildings will blend with the landscape through implementation of green roofs that imply buildings as an extension of the landscape. The natural materials of stone, concrete, and wood will create a restrained aesthetic expression.

EQUESTRIAN CENTER | LAND USE CLUSTER MAP

COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL

CLUSTER USES

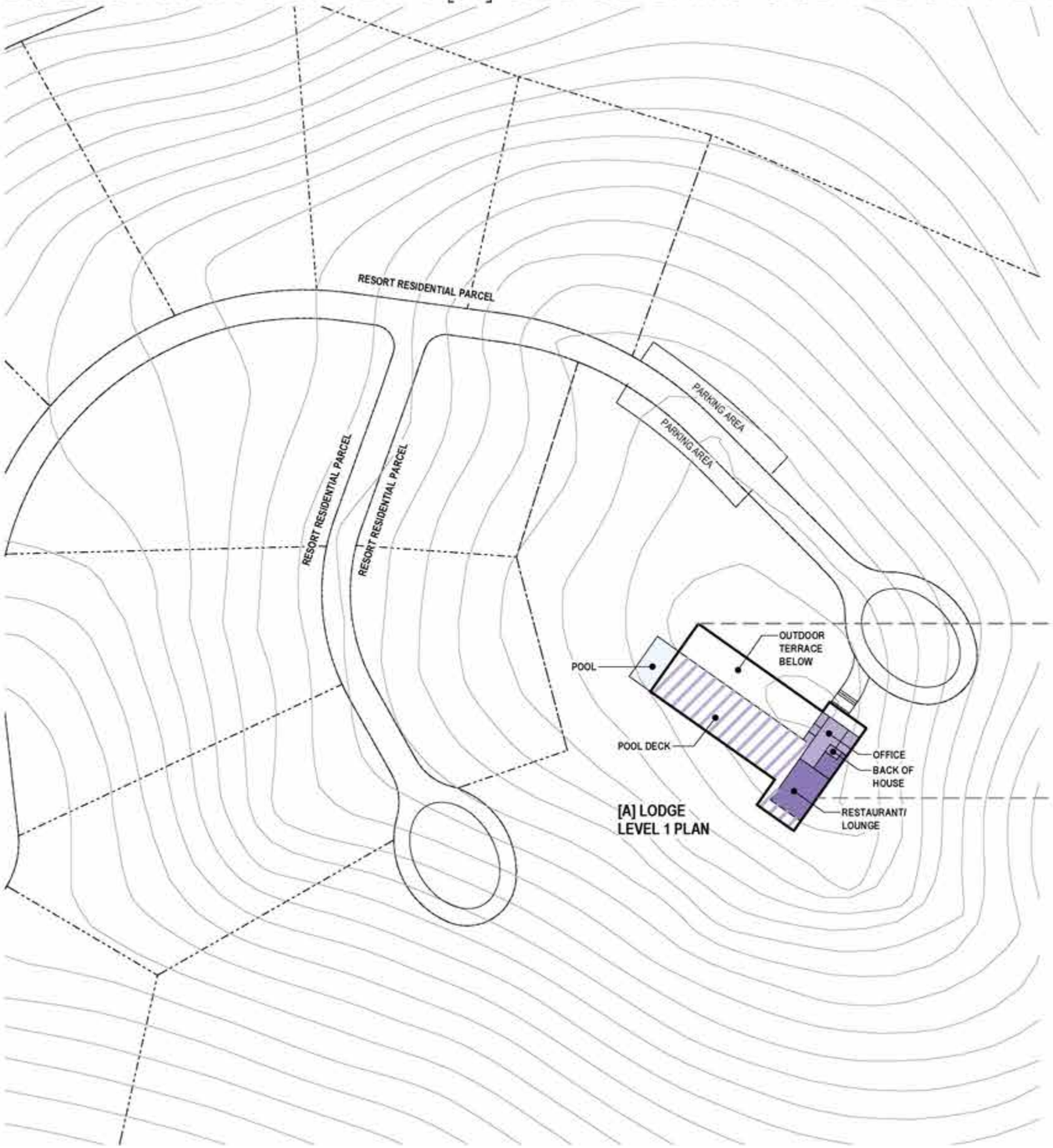
6 HOTEL UNITS
12 RESORT RESIDENTIAL UNITS
74 RESIDENTIAL VILLAS
FACILITIES
[A] EQUESTRIAN LODGE
[B] POLO CLUB HOUSE
[C] EQUESTRIAN STABLES
[D] PONY CAMP
[E] INDOOR ARENA

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 350' 700' 1400'

ORIGINAL SCALE: 1" = 700'-0"

EQUESTRIAN CENTER | [A] LODGE LAND USE FLOOR PLANS



COLOR LEGEND	
INDOOR / OUTDOOR	
	RESORT - PRIMARY
	RESORT - COMMERCIAL
	RESORT - ACCESSORY

EQUESTRIAN CENTER 1

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] LODGE					
	HOTEL ROOM [6]	HOTEL UNIT	4,800 SF	0 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	1,800 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	3,100 SF	0 SF	
	BOH/MECHANICAL	RESORT SUPPORT	1,300 SF	0 SF	
	OUTDOOR POOL	RECREATION	0 SF	1,000 SF	
	OUTDOOR TERRACE	RECREATION	0 SF	4,100 SF	
	POOL DECK	RECREATION	0 SF	6,700 SF	
GRAND TOTAL					22,700 SF

DESCRIPTION

The Equestrian Lodge, with its cantilevered concrete structure, will give the visitors the feeling of floating above the Guenoc Valley. It's strategic location on the top of the mountain will provide a bird's eye view of the entire Equestrian Center blending with nature.

Entering the building, guests will be struck by the spectacular mountain and lake vistas that fluctuate seasonally. The predominance of local wood and stone will provide warmth and rusticity to the modern spaces. The intention is to make the guests feel immersed in a retreat nestled in the mountains. The planted roof terrace opens to the soft winds and invites one to stop for a refreshment and dive into the infinity pool overlooking McCreary Lake. The lower level holds the most private and sheltered areas of the building. It's courtyard garden, carved into the mountain slope, gives light and tranquility to the guest room areas. Each bedroom opens to the dramatic views of the surrounding landscape.

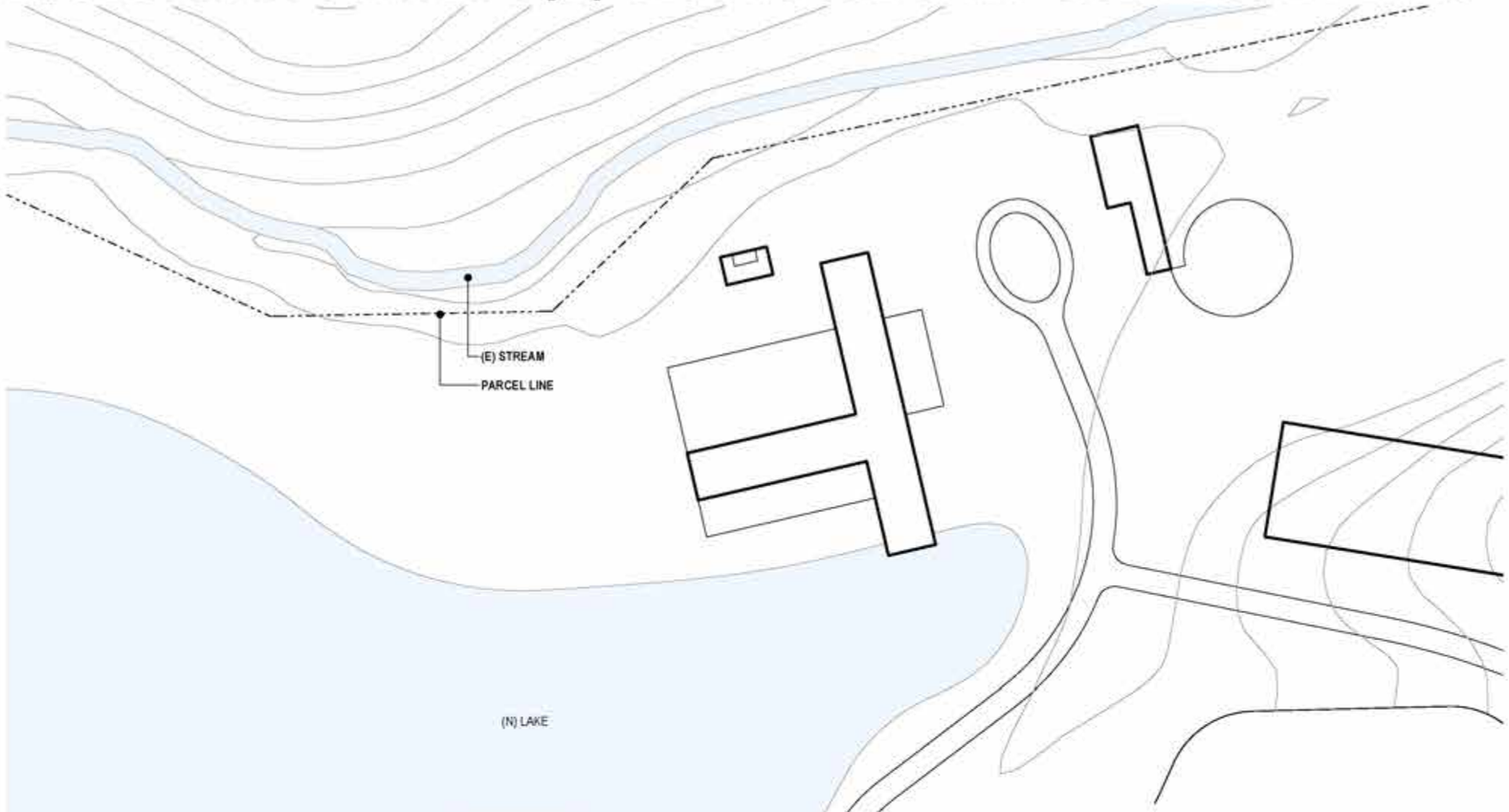
NOTE

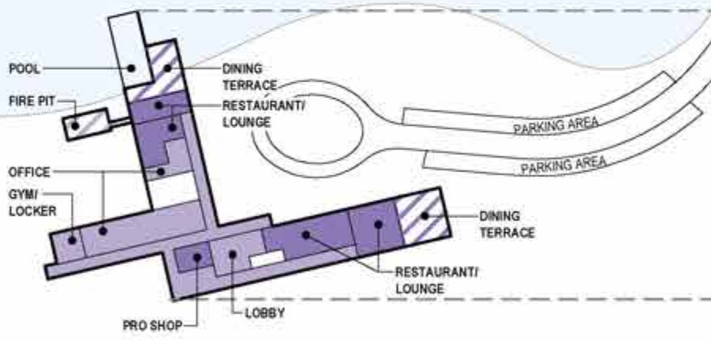
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 50' 100' 200'

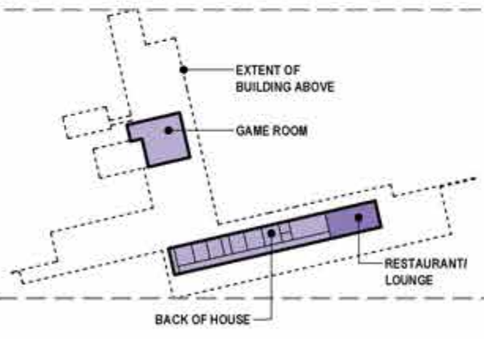
ORIGINAL SCALE: 1" = 100'-0"

EQUESTRIAN CENTER | [B] CLUBHOUSE LAND USE FLOOR PLANS

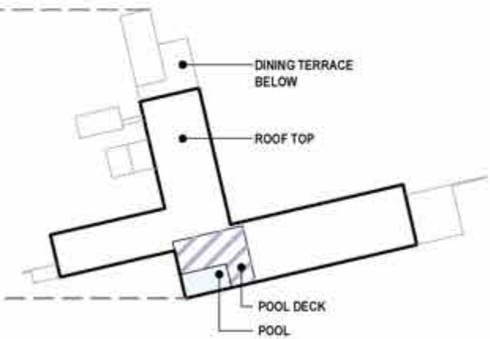




[B] CLUBHOUSE
LEVEL 1 PLAN



[B] CLUBHOUSE
BASEMENT PLAN



[B] CLUBHOUSE
ROOF PLAN

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

EQUESTRIAN CENTER 2

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[B] CLUBHOUSE					
	PRO SHOP	RETAIL	900 SF	0 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	10,600 SF	0 SF	
	DINING TERRACE	FOOD & BEVERAGE	0 SF	4,700 SF	
	LOBBY	RESORT MANAGEMENT	10,100 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	4,100 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	4,700 SF	0 SF	
	OFFICE	RESORT SUPPORT	1,200 SF	0 SF	
	FIRE PIT	ENTERTAINMENT	300 SF	0 SF	
	GAME ROOM	ENTERTAINMENT	2,300 SF	0 SF	
	FIRE PIT	ENTERTAINMENT	0 SF	900 SF	
	GYM/LOCKER	RECREATION	1,000 SF	0 SF	
	OUTDOOR POOL	RECREATION	0 SF	3,600 SF	
	POOL DECK	RECREATION	0 SF	3,200 SF	
GRAND TOTAL					47,600 SF

DESCRIPTION

The Clubhouse, the heart of the Equestrian Center, is strategically located between the main polo field and the new projected lake. The building is conceived with two main perpendicular wings. One parallel to the central polo field and the other extending towards the lake. Including large windows with spectacular views towards the natural landscape, stunning planted roofs, and internal patios will enhance the experience of living in such a magnificent environment

Members will enjoy drinks or lunch while watching a polo match from the restaurant and the terraces that over-look the field. They will also be able to stop at the exclusive tack shop to purchase riding apparel and equipment. Centrally located is the club's office where guests can get assistance booking a polo practice or a riding class.

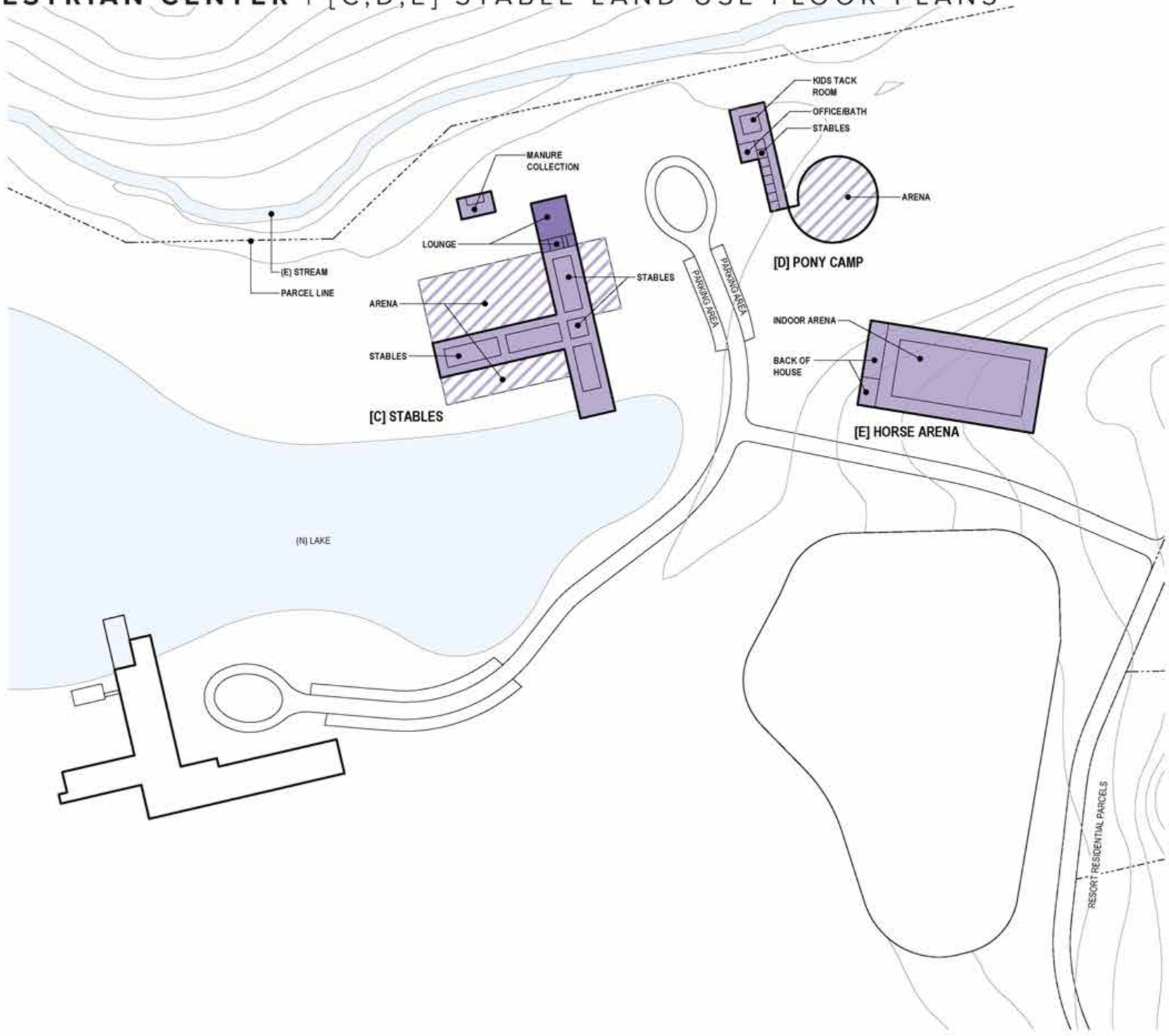
After competition polo players and riders will be able to have a drink and socialize at the bar, take a massage at the spa, or shower and change in the wooden lined locker rooms. Adult members will also enjoy a garden roof terrace with a singular infinity pool and bar lounge while unwinding and watching polo games. On the north wing, families will be able to relax and gather around the swimming pool or the restaurant overlooking the lake and mountains

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 75' 150' 300'

ORIGINAL SCALE: 1" = 150'-0"

EQUESTRIAN CENTER | [C,D,E] STABLE LAND USE FLOOR PLANS



COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

EQUESTRIAN CENTER 3

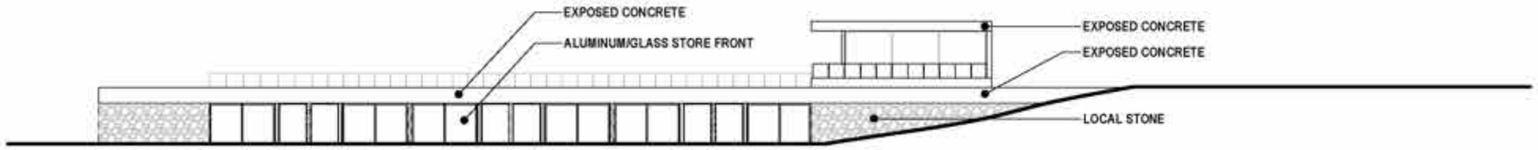
BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[C] STABLES					58,500 SF
	MANURE COLLECTION	BACK OF HOUSE	1,600 SF	0 SF	
	STABLES	RECREATION	23,000 SF	0 SF	
	ARENA	RECREATION	0 SF	30,100 SF	
	LOUNGE	FOOD & BEVERAGE	3,900 SF	0 SF	
[D] PONY CAMP					18,700 SF
	OFFICE/BATH	RESORT SUPPORT	700 SF	0 SF	
	KIDS TACK ROOM	ENTERTAINMENT	700 SF	0 SF	
	STABLES	RECREATION	4,900 SF	0 SF	
	ARENA	RECREATION	0 SF	12,400 SF	
[E] HORSE ARENA					33,000 SF
	BACK OF HOUSE	RESORT SUPPORT	3,300 SF	0 SF	
	INDOOR HORSE ARENA	RECREATION	29,700 SF	0 SF	
GRAND TOTAL					110,200 SF

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

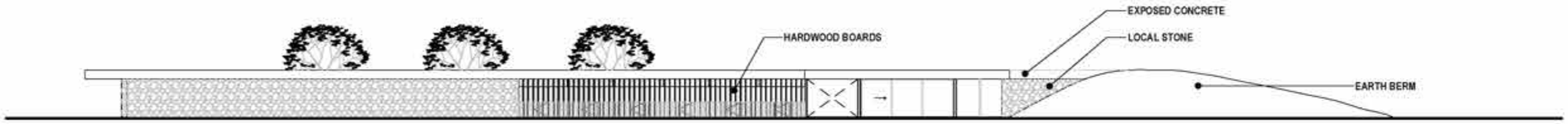
0' 50' 100' 200'

ORIGINAL SCALE: 1" = 100'-0"

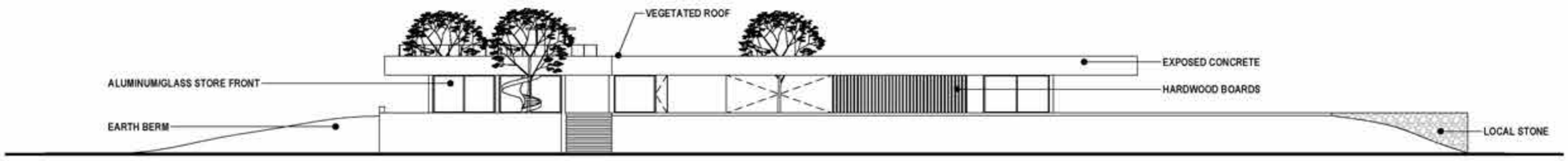
EQUESTRIAN CENTER | ELEVATIONS



LODGE NORTH ELEVATION



STABLES EAST ELEVATION



CLUBHOUSE EAST ELEVATION

0' 16' 32' 64'

ORIGINAL SCALE: 1/32" = 1'-0"

EXPOSED CONCRETE

HARDWOOD BOARDS

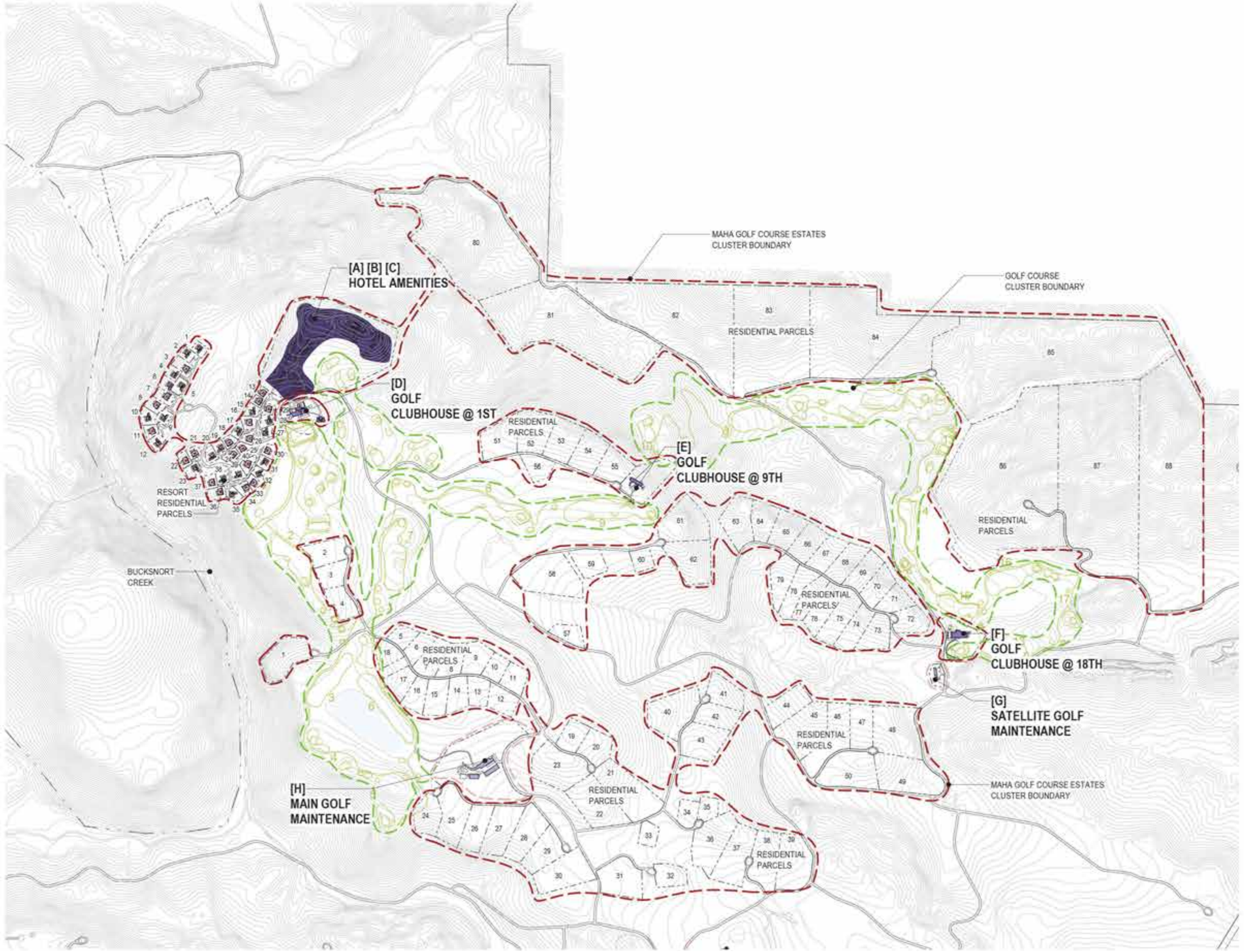
LOCAL STONE

HARDWOOD FLOORING

Denniston Golf Estates - Denniston International

Guests arrive at a lower level and are introduced to the landscape which they will traverse in a curated procession to the Main Lodge. Amenities such as a lounge, bar, dining room, library, and boutique occur under one roof at the Main Lodge. Derived from local Native American dwellings, the round shape allows for maximum views from its circumference and takes advantage of the resulting internal courtyard, which offers a prime location for special dinners and events.

DENNISTON GOLF ESTATES | LAND USE CLUSTER MAP



COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL

CLUSTER USES

50 HOTEL UNITS
40 RESORT RESIDENTIAL UNITS
88 RESIDENTIAL VILLAS

FACILITIES

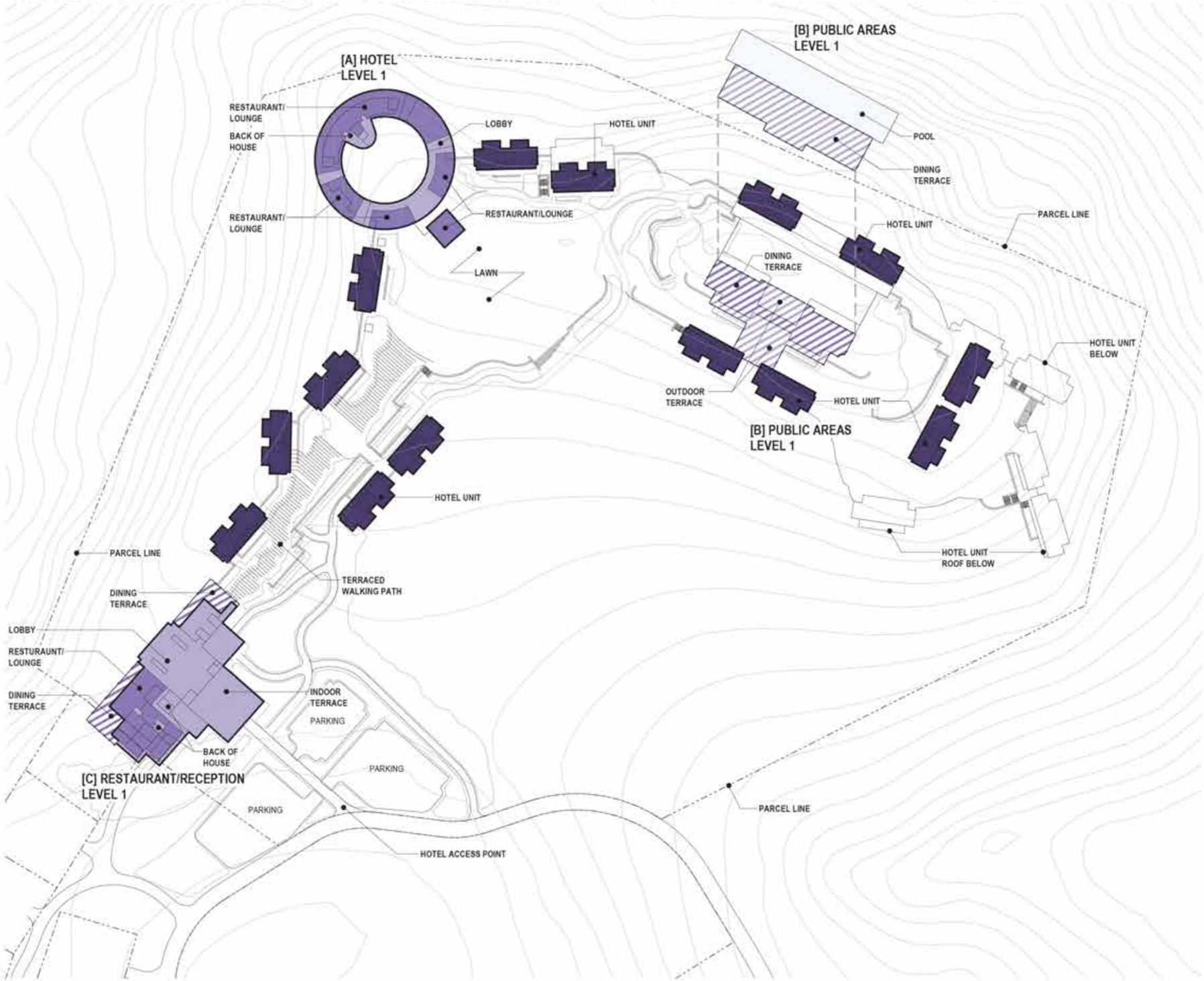
[A] HOTEL
[B] PUBLIC AREAS
[C] SPECIALTY RESTAURANT
GOLF COURSE
[D] GOLF COURSE – 1ST CLUBHOUSE
[E] GOLF COURSE – 9TH CLUBHOUSE
[F] GOLF COURSE – 18TH CLUBHOUSE
[G] & [H] GOLF COURSE MAINTENANCE

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 600' 1200' 2400'

ORIGINAL SCALE: 1" = 1200'-0"

DENNISTON GOLF ESTATES | HOTEL ENTRY LEVEL LAND USE FLOOR PLAN



COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

HOTEL ENTRY LEVEL

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] HOTEL					**78,200 SF**
	HOTEL ROOM [28]	HOTEL UNIT	52,600 SF	0 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	18,700 SF	0 SF	
	LOBBY	RESORT MANAGEMENT	5,500 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	1,400 SF	0 SF	
[B] PUBLIC AREAS					**47,100 SF**
	DINING TERRACE	FOOD & BEVERAGE	0 SF	24,300 SF	
	OUTDOOR POOL		0 SF	14,500 SF	
	OUTDOOR TERRACE	RECREATION	0 SF	8,300 SF	
[C] RESTAURANT/RECEPTION					**38,200 SF**
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	8,300 SF	0 SF	
	DINING TERRACE	FOOD & BEVERAGE	0 SF	4,700 SF	
	LOBBY	RESORT MANAGEMENT	23,200 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	400 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	1,600 SF	0 SF	
GRAND TOTAL					**163,500 SF**

DESCRIPTION

The design aims to provide to all guest and visitors a close to nature and elements experience, but in a conformable and secure environment. Already the wandering roads through the resort to the several hotel components is an experience of nature and wildlife, with unobstructed views and a feeling of freedom. Only in close proximity the buildings smoothly reveal themselves as elements that belong to their surroundings, giving the impression that they have always been there. When entering the building, the guest should feel a change of scenery, however still seamlessly connected to nature, with framed and controlled views of the landscape, dramatic experience of levels, as well as discovering micro environments inside always just one step away from the door or window.

NOTE

Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 75' 150' 300'

ORIGINAL SCALE: 1" = 150'-0"

DENNISTON GOLF ESTATES | HOTEL LOWER LEVEL LAND USE PLAN

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

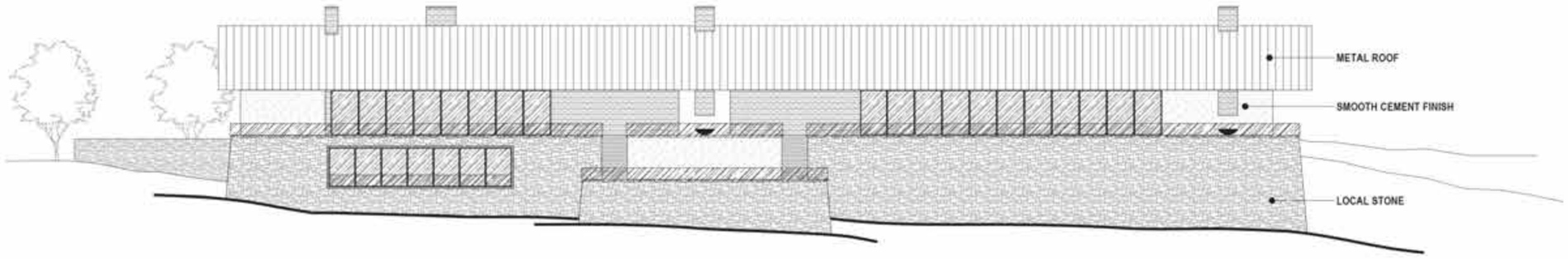
HOTEL LOWER LEVEL

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] HOTEL					**84,900 SF**
	HOTEL ROOM [22]	HOTEL UNIT	41,300 SF	0 SF	
	LOBBY	RESORT MANAGEMENT	16,100 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	14,000 SF	0 SF	
	MUSIC STUDIO	ENTERTAINMENT	6,800 SF	0 SF	
	OUTDOOR TERRACE	RECREATION	0 SF	6,700 SF	
[C] RESTAURANT/RECEPTION					**17,100 SF**
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	10,300 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	2,500 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	4,300 SF	0 SF	
GRAND TOTAL					**102,100 SF**

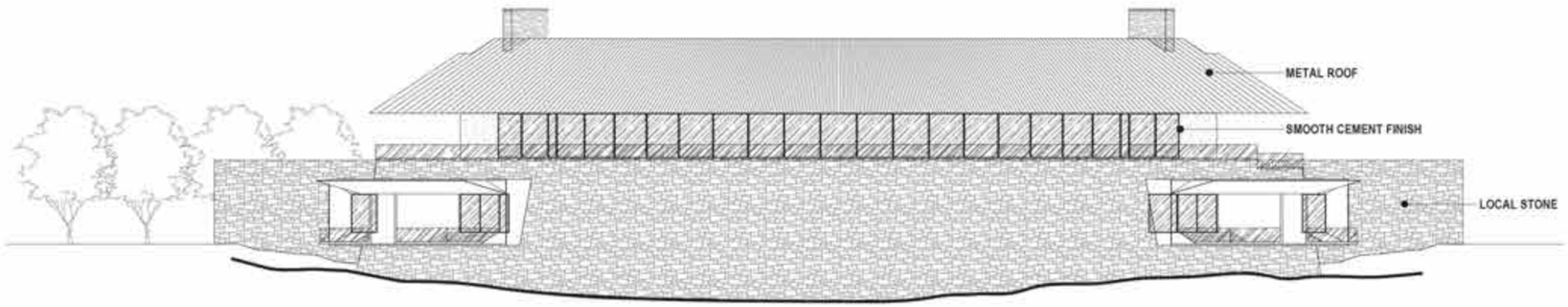
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 75' 150' 300'

ORIGINAL SCALE: 1" = 150'-0"



ARRIVAL BUILDINGS & SPECIALITY RESTAURANT SOUTH ELEVATION



LODGE RESTAURANT SOUTH ELEVATION

SMOOTH CEMENT FINISH

METAL ROOF

LOCAL STONE

0' 16' 32' 64'

ORIGINAL SCALE: 1/32" = 1'-0"

Renaissance Golf Course - Tom Doak

The design of these buildings aims to create harmony with the natural context through the implementation of materials, finishes and careful detailing that carry on the architectural language set forth by the Main Lodge. The first and 18th Golf Clubhouses integrate lounge, bar and dining areas for the use of its members. The clubhouse at the ninth hole is highlighted by sculptural landscape and integrated building form creating a unique event space with views along the cliff line.

The Golf Maintenance buildings, while housing utilitarian and practical support aspects, will reflect the homestead feel of the main back of house program.

RENAISSANCE GOLF COURSE | CLUBHOUSE LAND USE FLOOR PLANS

[D] GOLF CLUBHOUSE
1ST HOLE - BASEMENT

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

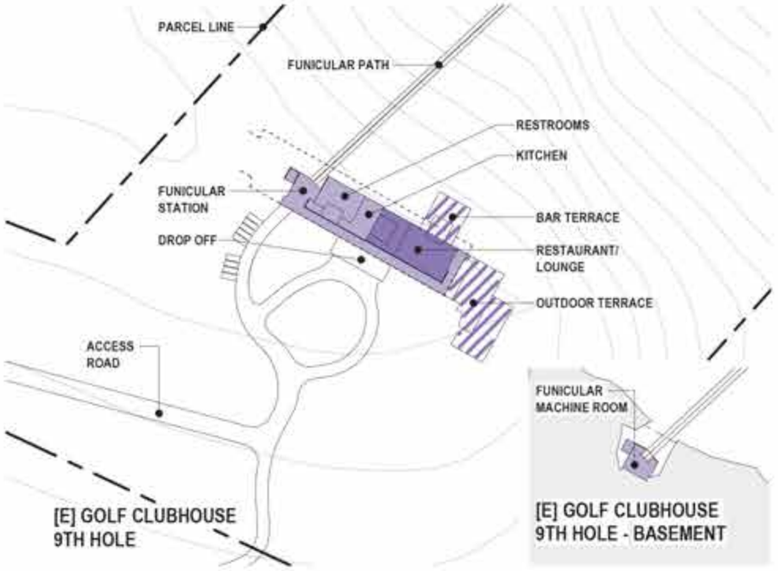
GOLF CLUBHOUSES

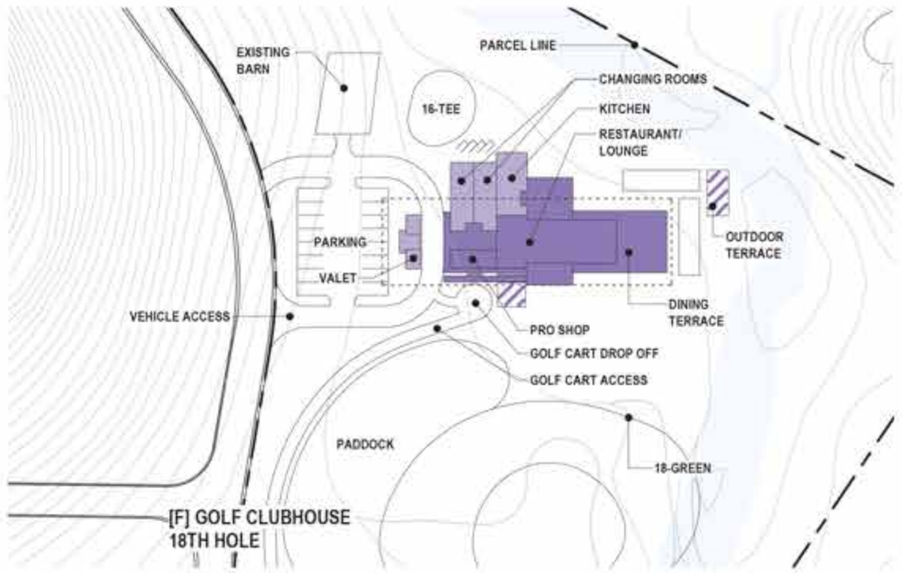
BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[D] GOLF CLUBHOUSE 1ST HOLE					**38,235 SF**
GROUND LEVEL					24,935 SF
	PRO SHOP	RETAIL	1005 SF		
	OFFICE	RESORT MANAGEMENT	290 SF	70 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	1770 SF		
	KITCHEN	FOOD & BEVERAGE	645 SF		
	OUTDOOR TERRACE	RECREATION		12235 SF	
	CHANGING ROOMS	RECREATION	2150 SF		
	GYM	RECREATION	1775 SF		
	POOL	RECREATION		3630 SF	
	BACK OF HOUSE	RESORT SUPPORT	325 SF		
	GOLF STORAGE	RESORT SUPPORT	635 SF		
	GYM STORAGE	RESORT SUPPORT	215 SF		
	RESTROOMS	RESORT SUPPORT	190 SF		
BASEMENT					7,174 SF
	GOLF CART STORAGE	RESORT SUPPORT	5164 SF		
	GOLF STORAGE	RESORT SUPPORT	710 SF		
	BACK OF HOUSE	RESORT SUPPORT	1300 SF		
PERFORMANCE CENTER					2,650 SF
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	380 SF	320 SF	
	HITTING BAYS	RECREATION	1670 SF		
	STORAGE	RESORT SUPPORT	200 SF		
	RESTROOMS	RESORT SUPPORT	80 SF		
GRAND TOTAL					**38,235 SF**

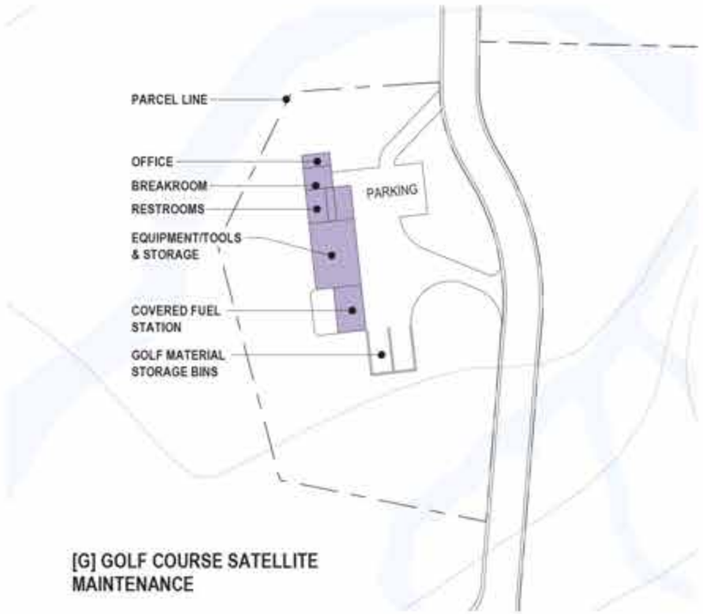
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

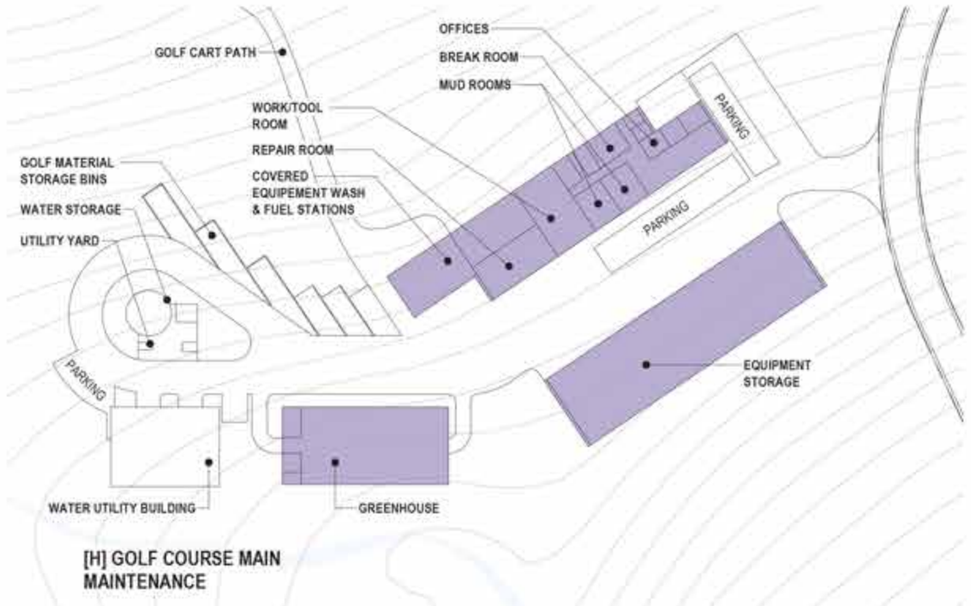
0' 40' 80' 160'
ORIGINAL SCALE: 1" = 80'-0"

RENAISSANCE GOLF COURSE | CLUBHOUSE & MAINTENANCE LAND USE FLOOR PLANS









COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

GOLF CLUBHOUSES

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[E] GOLF CLUBHOUSE 9TH HOLE					**7,260 SF**
GROUND LEVEL					6,165 SF
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	1390 SF		
	BAR TERRACE	FOOD & BEVERAGE		640 SF	
	KITCHEN	FOOD & BEVERAGE	395 SF		
	OUTDOOR TERRACE	RECREATION		1780 SF	
	RESTROOMS	RESORT SUPPORT	500 SF		
	BACK OF HOUSE	RESORT SUPPORT	245 SF	1215 SF	
BASEMENT					435 SF
	BACK OF HOUSE	RESORT SUPPORT	435 SF		
[F] GOLF CLUBHOUSE 18TH HOLE					**11,028 SF**
	PRO SHOP	RETAIL	370 SF		
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	4740 SF		
	DINING TERRACE	FOOD & BEVERAGE	1680 SF		
	KITCHEN	FOOD & BEVERAGE	795 SF		
	OUTDOOR TERRACE	RECREATION		715 SF	
	CHANGING ROOMS	RESORT SUPPORT	1315 SF		
	BACK OF HOUSE	RESORT SUPPORT	410 SF		
GRAND TOTAL					**18,288 SF**

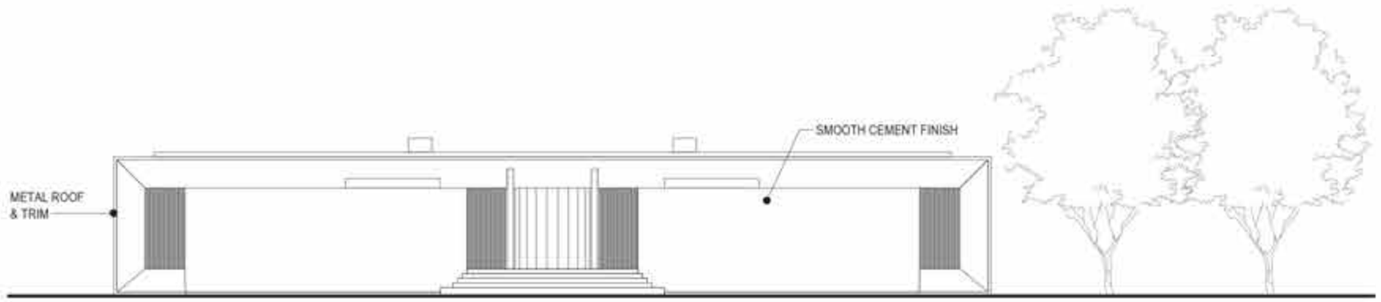
GOLF COURSE MAINTENANCE

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[G] GOLF COURSE SATELLITE MAINTENACE					**3,262 SF**
	OFFICE	RESORT MANAGEMENT	160 SF		
	BREAKROOM	RESORT MANAGEMENT	270 SF		
	MUD ROOM	RESORT SUPPORT	665 SF		
	EQUIPEMENT STORAGE	RESORT SUPPORT	1315 SF		
	WASH & FUEL	RESORT SUPPORT	555 SF		
[H] GOLF COURSE MAIN MAINTENACE					**28,325 SF**
MAIN GOLF MAINTENANCE BUILDING					10,515 SF
	OFFICE	RESORT MANAGEMENT	2900 SF		
	BREAKROOM	RESORT MANAGEMENT	470 SF		
	RESTROOMS	RESORT SUPPORT	195 SF		
	MUD ROOM	RESORT SUPPORT	1115 SF		
	WORK & REPAIR	RESORT SUPPORT	4210 SF		
	WASH & FUEL	RESORT SUPPORT	1625 SF		
EQUIPEMENT STORAGE BUILDING					9,645 SF
	EQUIPEMENT STORAGE	RESORT SUPPORT	9645 SF		
GREENHOUSE					5,590 SF
	GREENHOUSE	RESORT SUPPORT	5085 SF		
	BACK OF HOUSE	RESORT SUPPORT	155 SF		
	STORAGE	RESORT SUPPORT	250 SF		
	RESTROOM	RESORT SUPPORT	100 SF		
GRAND TOTAL					**31,587 SF**

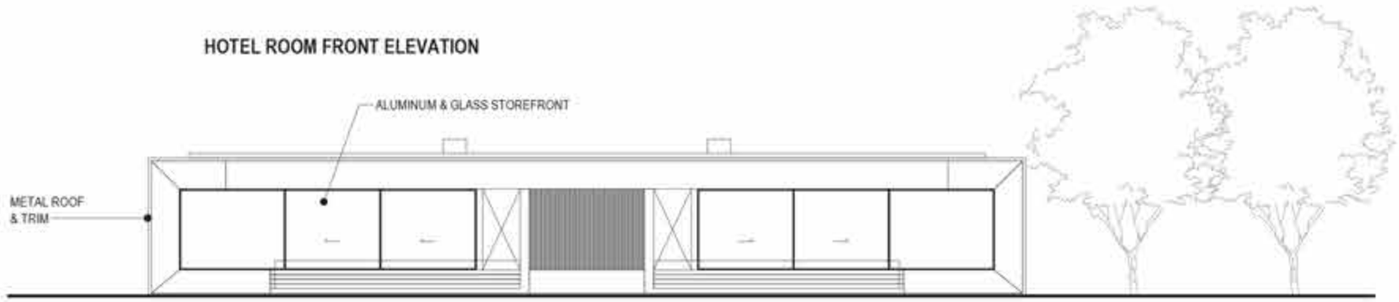
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 50' 100' 200'

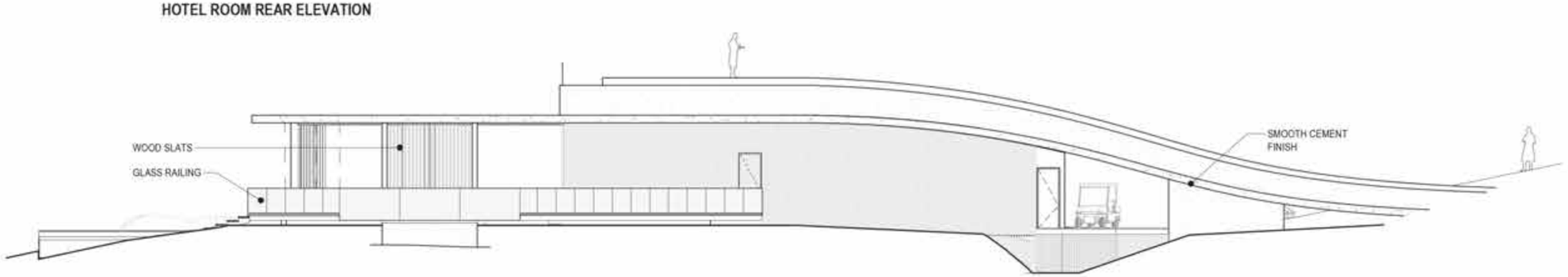
ORIGINAL SCALE: 1" = 100'-0"



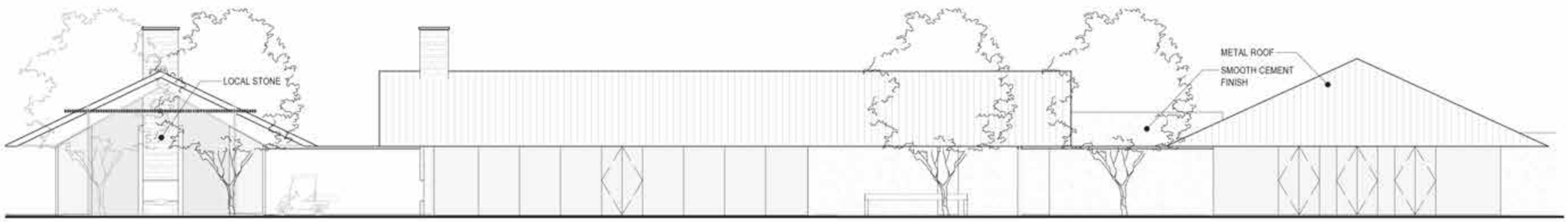
HOTEL ROOM FRONT ELEVATION



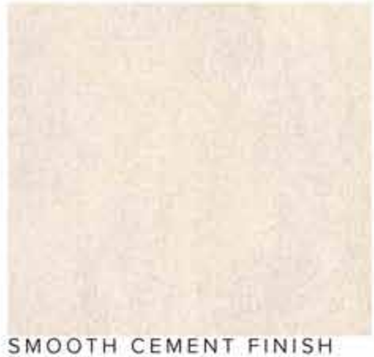
HOTEL ROOM REAR ELEVATION



GOLF CLUBHOUSE 9TH NORTH ELEVATION



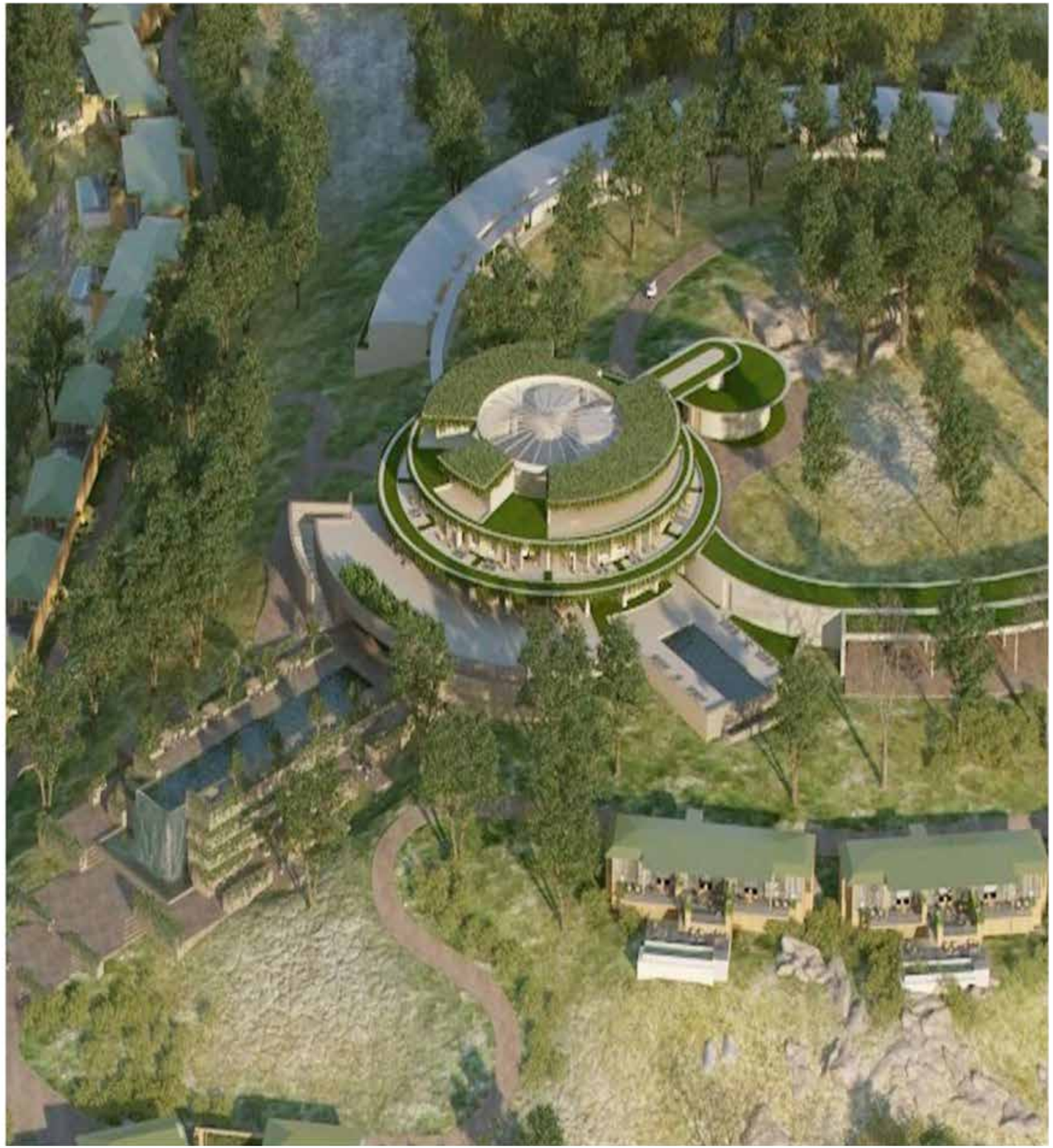
GOLF CLUBHOUSE 1ST SOUTH ELEVATION



SMOOTH CEMENT FINISH

METAL ROOF

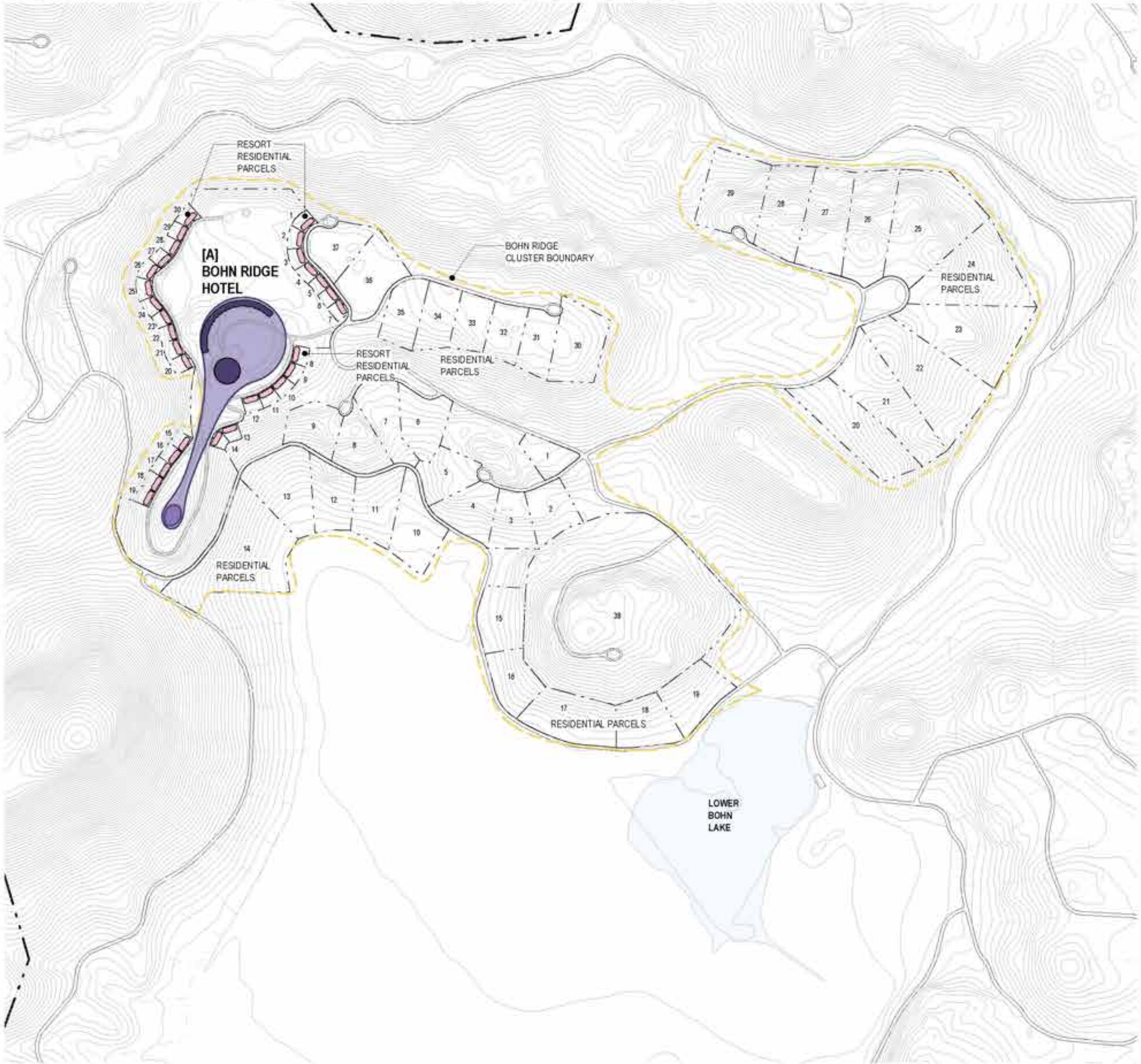
LOCAL STONE



Bohn Ridge Resort - Design Realization

Before the vast beauty of Bohn Ridge and its panoramic views, this architectural cluster adopts the simplicity of barn architecture in shapes, volumes, and the intermingled juxtaposition between indoor and outdoor living spaces. Building footprints are scaled according to the existing geological footprints, minimizing the built form in respect to the site. Low-lying residential resort structures with pitched roofs, planted roofs and stone paved terraces will complement the site.

BOHN RIDGE RESORT | LAND USE CLUSTER MAP



COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL

CLUSTER USES

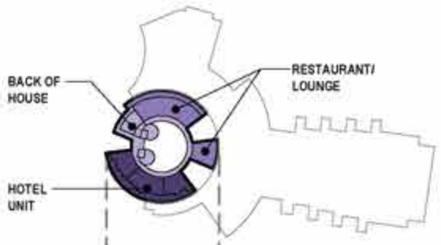
31 HOTEL UNITS
30 RESORT RESIDENTIAL UNITS
39 RESIDENTIAL VILLAS

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

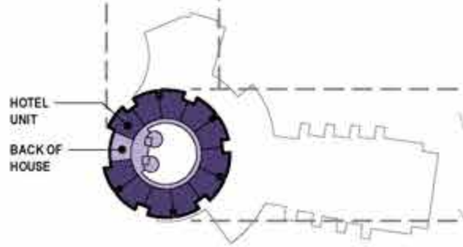
0' 400' 800' 1600'

ORIGINAL SCALE: 1" = 800'-0"

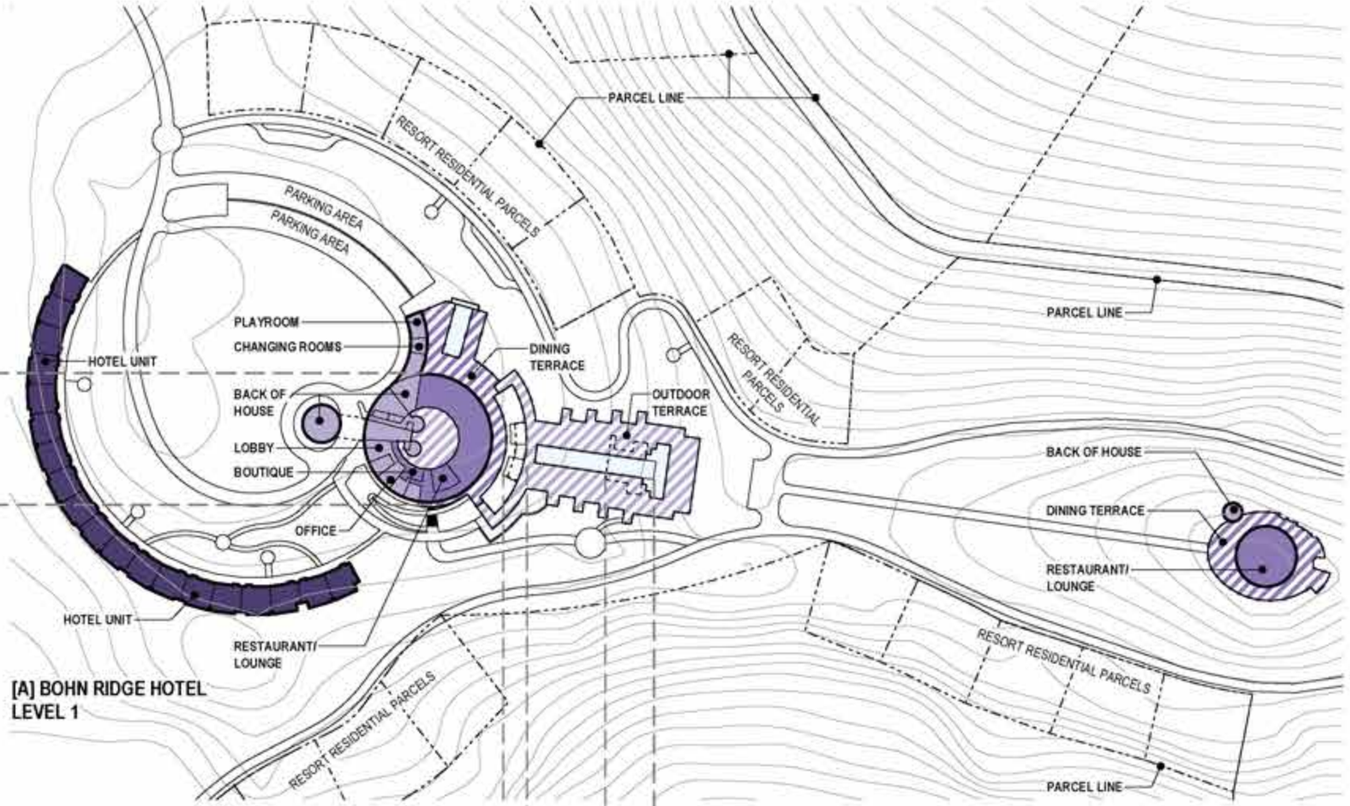
BOHN RIDGE RESORT | LAND USE FLOOR PLANS



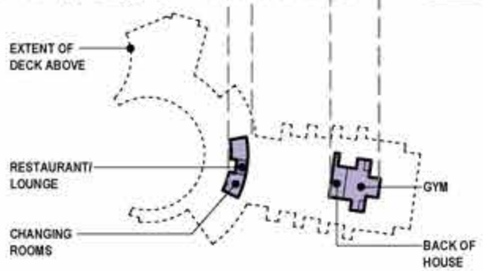
[A] BOHN RIDGE HOTEL
LEVEL 3



[A] BOHN RIDGE HOTEL
LEVEL 2



[A] BOHN RIDGE HOTEL
LEVEL 1



[A] BOHN RIDGE HOTEL
BASEMENT

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

BOHN RIDGE

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] BOHN RIDGE HOTEL					
	31 UNITS	HOTEL UNIT	48,500 SF	0 SF	
	BOUTIQUE	RETAIL	900 SF	0 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	15,300 SF	0 SF	
	DINING TERRACE	FOOD & BEVERAGE	0 SF	10,700 SF	
	LOBBY	RESORT MANAGEMENT	2,800 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	1,300 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	16,700 SF	0 SF	
	PLAYROOM	ENTERTAINMENT	800 SF	0 SF	
	CHANGING ROOMS	RECREATION	1,900 SF	0 SF	
	GYM	RECREATION	2,300 SF	0 SF	
	OUTDOOR POOL	RECREATION	0 SF	7,900 SF	
	OUTDOOR TERRACE	RECREATION	0 SF	29,700 SF	
GRAND TOTAL					138,600 SF

DESCRIPTION

Our approach is to blend with the site and allow the guests to experience a place where interior and exterior spaces are well integrated, either public or private.

Bohn Ridge Resort is composed of 1 and 2 bedrooms which are snuggled into a beautiful natural landscape following the levels of the terrain, located around a central element which is the core of the hotel and offers 360 degrees sweeping views. The buildings seem to grow out of the hillside in a monolithic way, emphasized by the choice of materials and colors, relating to the site. The various buildings openings onto terraces are the features which best define the essence of the project, ie: allowing the guests to feel part of the nature around. This is because of the natural beauty of the site, hills, trees, rock formations.

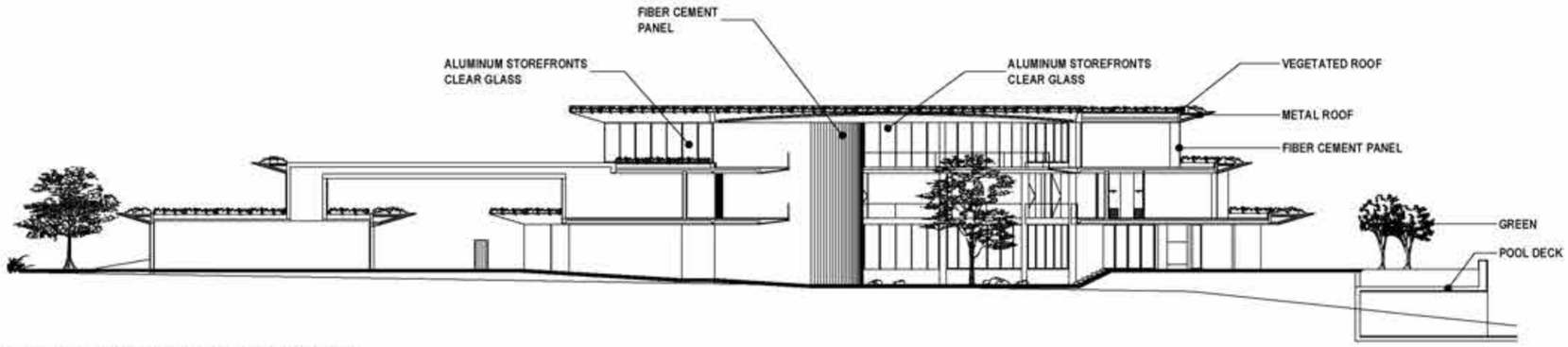
NOTE

Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

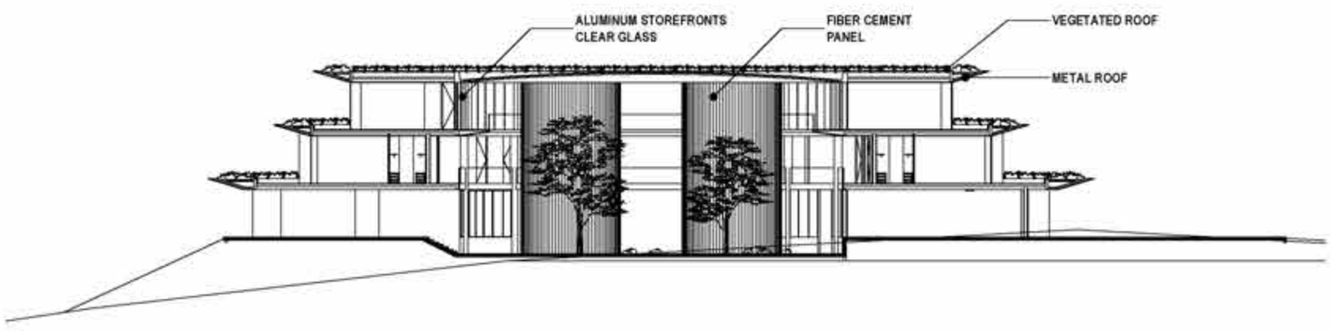
0' 100' 200' 400'

ORIGINAL SCALE: 1" = 200'-0"

BOHN RIDGE HOTEL | ELEVATIONS



BOHN RIDGE HOTEL WEST-EAST ELEVATION



BOHN RIDGE HOTEL WEST-EAST ELEVATION

0' 16' 32' 64'

ORIGINAL SCALE: 1/32" = 1'-0"

METAL ROOF

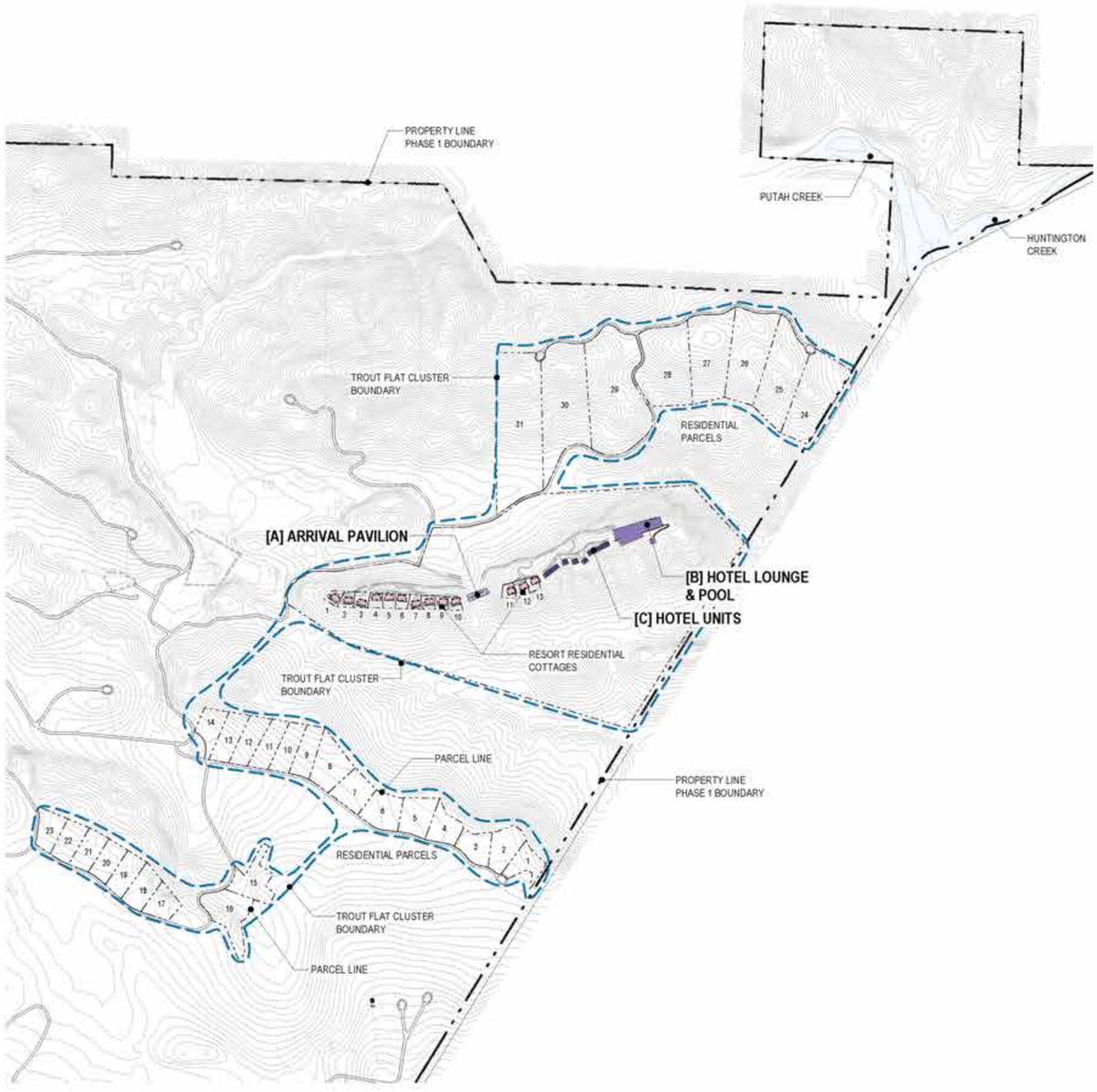
FORMED CONCRETE

HONED STONE

Resort at Trout Flat - Kerry Hill Architects

A cluster of single story pavilions along the ridgeline will overlook vineyards on the Property. Inspired by the concept of a low-impact eco-lodge, the plan positions each building according to existing contours to minimize disturbance to the terrain. Combining stone plinths and rammed earth walls, high ceilings extend the feeling of openness and transparency from the exterior landscape into the interior. This site is detailed by outdoor spaces, a lounge veranda, and dining terrace overlooking a reflection pool.

RESORT AT TROUT FLAT | LAND USE CLUSTER MAP



COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL

CLUSTER USES

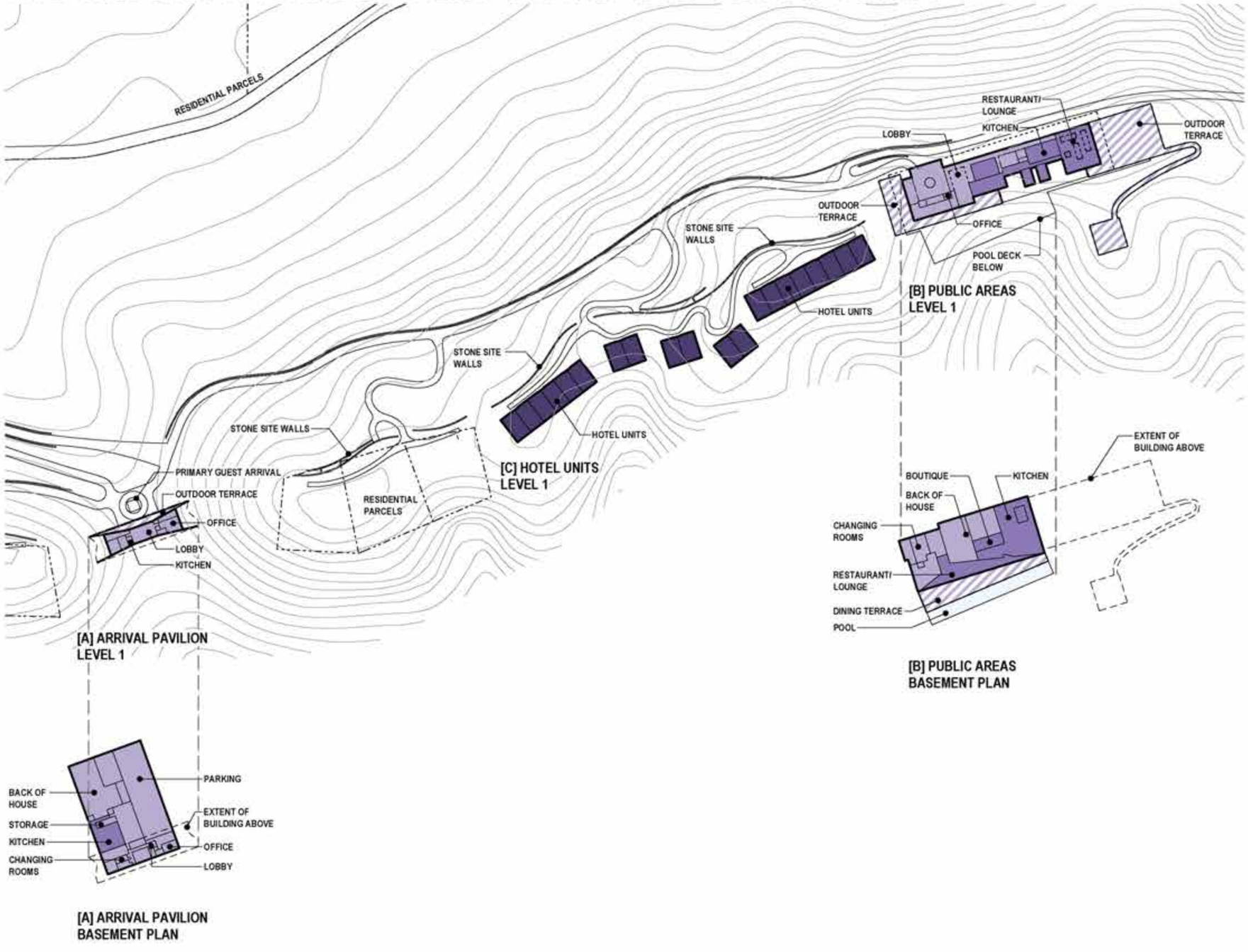
20 HOTEL UNITS
13 RESORT RESIDENTIAL UNITS
31 RESIDENTIAL VILLAS
FACILITIES
[A] ARRIVAL PAVILLION
[B] LOUINGE & POOL

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 600' 1200' 2400'

ORIGINAL SCALE: 1" = 1200'-0"

THE RESORT AT TROUT FLAT | LAND USE FLOOR PLANS



COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

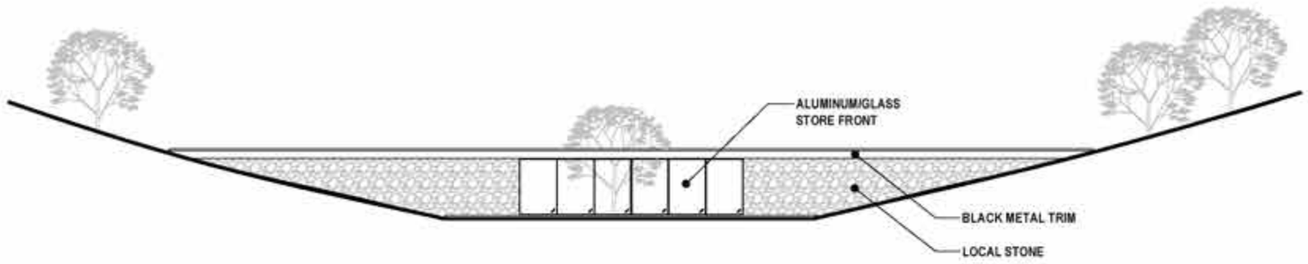
TROUT FLAT HOTEL 1

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
(A) ARRIVAL PAVILON					**39,900 SF**
	KITCHEN	FOOD & BEVERAGE	3,000 SF	0 SF	
	LOBBY	RESORT MANAGEMENT	4,200 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	3,000 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	16,000 SF	0 SF	
	PARKING	RESORT SUPPORT	10,800 SF	0 SF	
	STORAGE	RESORT SUPPORT	500 SF	0 SF	
	CHANGING ROOMS	RECREATION	600 SF	0 SF	
	OUTDOOR TERRACE	RECREATION	0 SF	1,700 SF	
(B) PUBLIC AREAS					**99,500 SF**
	BOUTIQUE	RETAIL	1,300 SF	0 SF	
	KITCHEN	FOOD & BEVERAGE	10,900 SF	0 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	17,000 SF	0 SF	
	DINING TERRACE	FOOD & BEVERAGE	0 SF	7,800 SF	
	LOBBY	RESORT MANAGEMENT	18,600 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	400 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	7,800 SF	0 SF	
	CHANGING ROOMS	RECREATION	3,000 SF	0 SF	
	OUTDOOR POOL	RECREATION	0 SF	6,900 SF	
	OUTDOOR TERRACE	RECREATION	0 SF	25,800 SF	
(C) HOTEL UNITS					**35,100 SF**
	HOTEL ROOM [20]	HOTEL UNIT	35,100 SF	0 SF	
GRAND TOTAL					**174,600 SF**

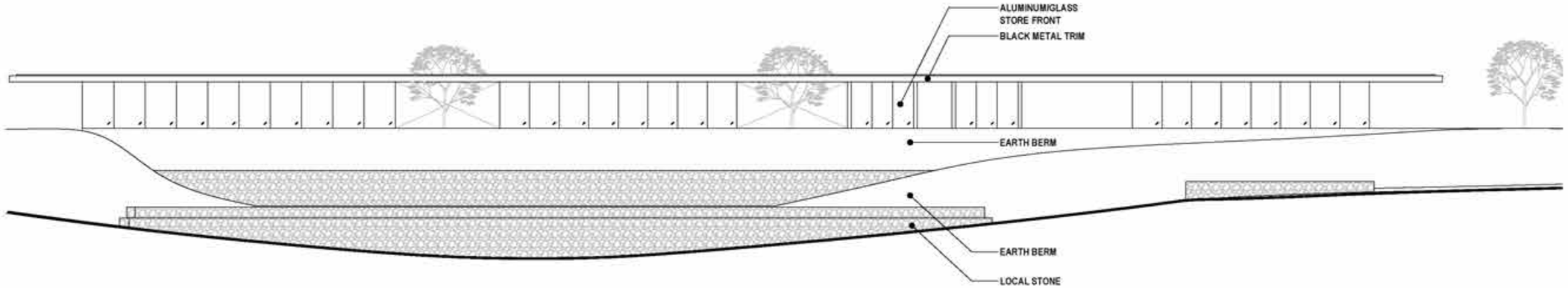
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 100' 200' 400'

ORIGINAL SCALE: 1" = 200'-0"



ARRIVAL PAVILION NORTH ELEVATION



PUBLIC AREAS SOUTH ELEVATION

ORIGINAL SCALE: 1/32" = 1'-0"

FINISHED CONCRETE

BLACK METAL

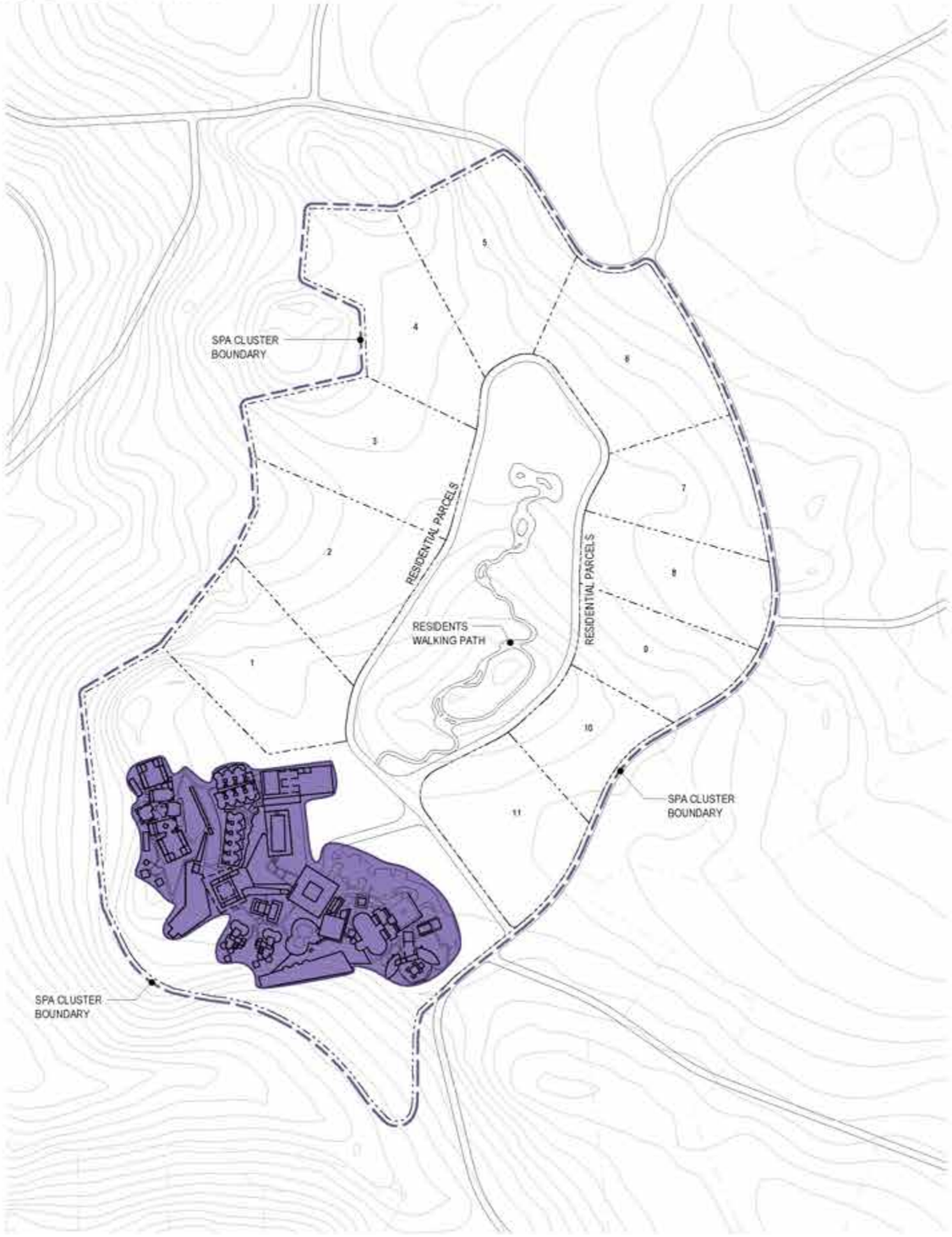
LOCAL STONE

TIMBER

Spa - Bunnag Architects

The celebration of the cultural heritage, which inspired the Veranda and Courtyard, also informs the design of the Spa. The sense of interior and exterior spaces blend into one integrated space. Replacing the traditional concept of architecture defined by a singular space, the spa was designed to embrace both interior and exterior spaces.

SPA | LAND USE CLUSTER MAP



COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL

CLUSTER USES

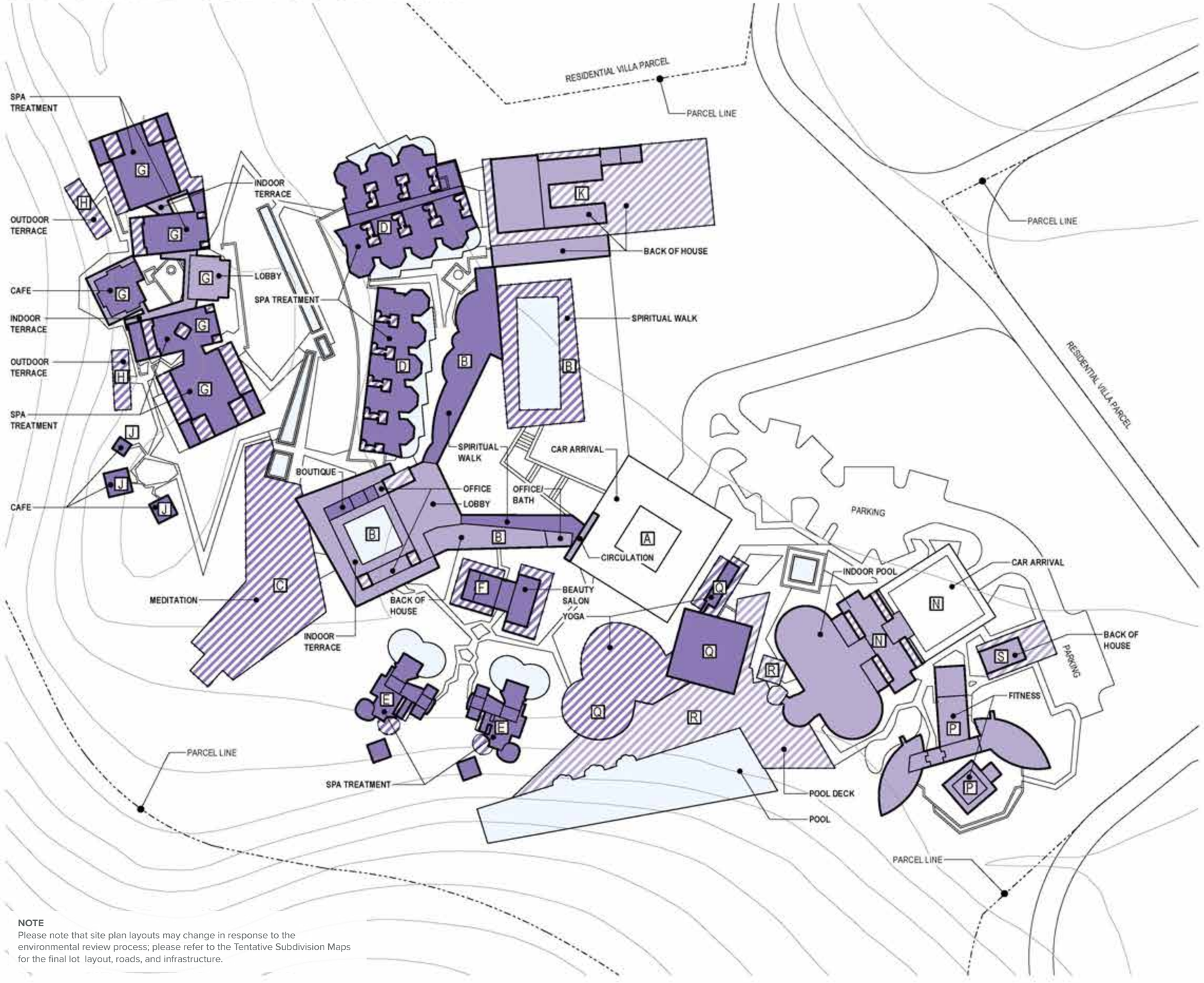
11 SPA VILLAS
FACILITIES
SPA
SPA RECREATION

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 200' 400' 800'

ORIGINAL SCALE: 1" = 400'-0"

SPA | LAND USE FLOOR PLAN



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

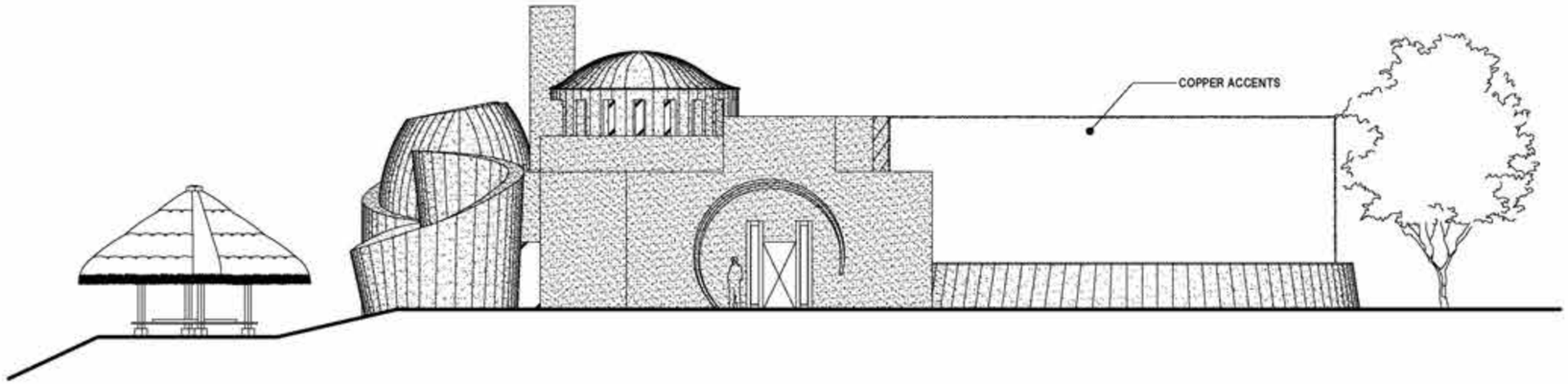
SPA

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] CAR ARRIVAL					**400 SF**
	CAR ARRIVAL	RESORT SUPPORT	400 SF	0 SF	
[B] RECEPTION					**38,200 SF**
	BOUTIQUE	RETAIL	800 SF	0 SF	
	POND	HEALTH & BEAUTY	0 SF	7,200 SF	
	SPIRITUAL WALK	HEALTH & BEAUTY	8,400 SF	6,300 SF	
	LOBBY	RESORT MANAGEMENT	4,000 SF	700 SF	
	OFFICE	RESORT MANAGEMENT	800 SF	0 SF	
	OFFICE/BATH	RESORT MANAGEMENT	400 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	2,800 SF	0 SF	
	INDOOR TERRACE	RECREATION	6,900 SF	0 SF	
[C] RAISED GRASS COURT					**16,400 SF**
	MEDITATION	HEALTH & BEAUTY	0 SF	16,400 SF	
[D] STANDARD TREATMENT					**26,600 SF**
	POND	HEALTH & BEAUTY	0 SF	4,900 SF	
	SPA TREATMENT	HEALTH & BEAUTY	18,900 SF	2,700 SF	
[E] DELUXE TREATMENT					**11,200 SF**
	POND	HEALTH & BEAUTY	0 SF	3,400 SF	
	SPA TREATMENT	HEALTH & BEAUTY	6,800 SF	900 SF	
[F] BEAUTY SALON					**5,000 SF**
	BEAUTY SALON	HEALTH & BEAUTY	2,800 SF	2,300 SF	
[G] DAY SPA & JUICE BAR					**27,400 SF**
	CAFE	FOOD & BEVERAGE	1,900 SF	0 SF	
	SPA TREATMENT	HEALTH & BEAUTY	15,700 SF	5,400 SF	
	LOBBY	RESORT MANAGEMENT	1,800 SF	0 SF	
	INDOOR TERRACE	RECREATION	2,500 SF	0 SF	
[H] RELAXATION TERRACE					**2,100 SF**
	INDOOR TERRACE	HEALTH & BEAUTY	0 SF	1,100 SF	
	OUTDOOR TERRACE	HEALTH & BEAUTY	0 SF	1,100 SF	
[J] TEA PAVILLION					**1,300 SF**
	CAFE	FOOD & BEVERAGE	1,300 SF	0 SF	
[K] BACK OF HOUSE 1					**20,700 SF**
	BACK OF HOUSE	RESORT SUPPORT	10,400 SF	10,400 SF	
[N] INDOOR POOL					**15,800 SF**
	INDOOR POOL	RECREATION	14,600 SF	1,200 SF	
[P] PILATES					**10,100 SF**
	FITNESS	RECREATION	10,100 SF	0 SF	
[Q] YOGA PAVILLION					**16,500 SF**
	YOGA	HEALTH & BEAUTY	5,900 SF	10,600 SF	
[R] OUTDOOR POOL					**32,100 SF**
	OUTDOOR POOL	RECREATION	0 SF	16,700 SF	
	POOL DECK	RECREATION	0 SF	15,400 SF	
[S] BACK OF HOUSE 2					**2,600 SF**
	BACK OF HOUSE	RESORT SUPPORT	1,000 SF	1,600 SF	
GRAND TOTAL					**228,800 SF**

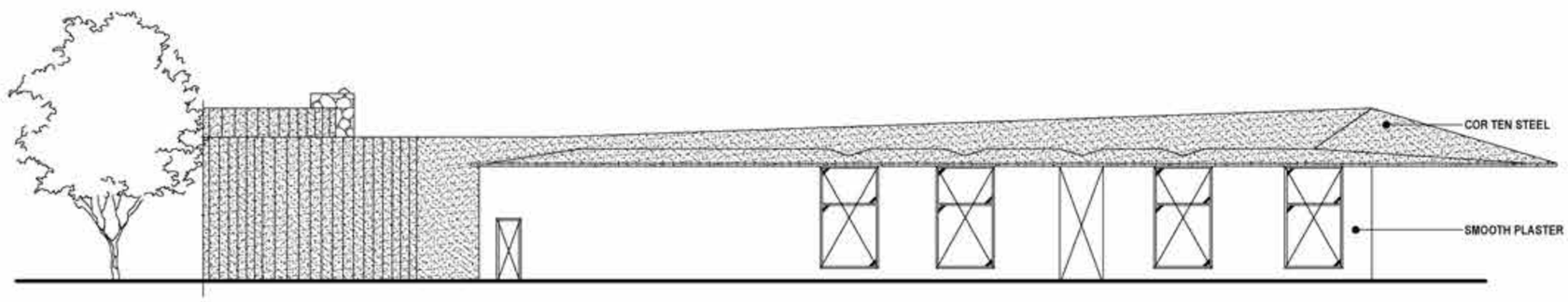
DESCRIPTION
With an aim to harmonize our design interventions to the existing environment, we propose a variety of "pure geometrical form and space" as a series of "small pavilions" amongst landscape. This approach allows Architecture to be more adaptable and flexible to assimilate into the existing delicate environment. It is a soft-design-approach that we believe will ensure minimum disruptive impact to the timeless beauty of the Region's land and culture.

0' 50' 100' 200'

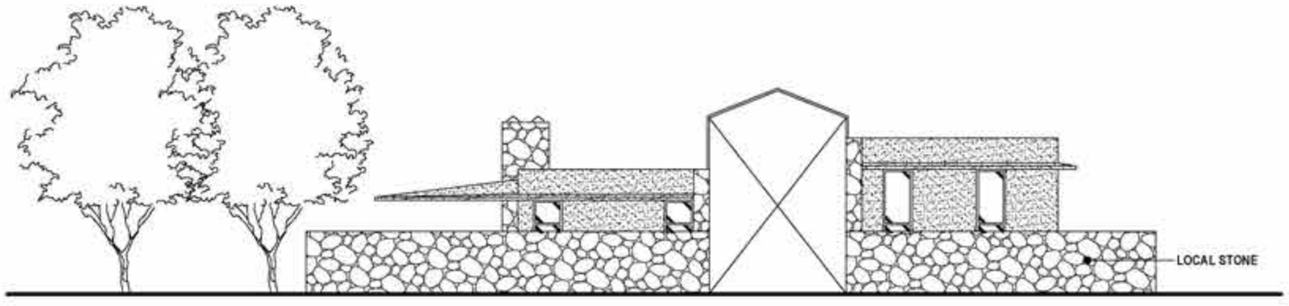
ORIGINAL SCALE: 1" = 100'-0"



DELUXE DOUBLE TREATMENT PAVILION WEST ELEVATION



SPA RECEPTION NORTH ELEVATION



BEAUTY SALON PAVILION SOUTH ELEVATION

0' 8' 16' 32'

ORIGINAL SCALE: 1/16" = 1'-0"

COPPER ACCENTS

COR TEN STEEL

LOCAL STONE

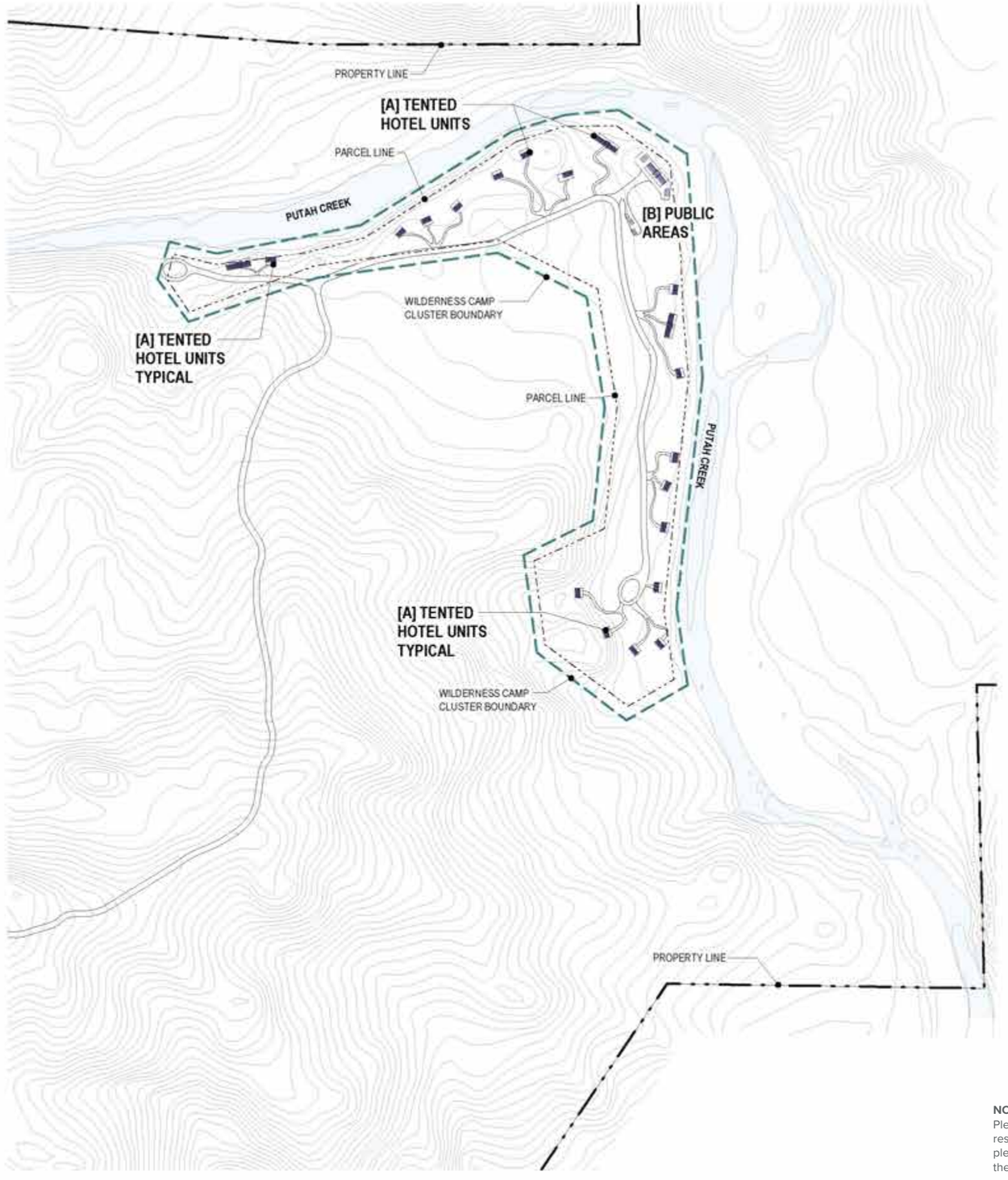
SMOOTH PLASTER

TENTED CAMP AREA

Tented Camp Area - Jan Kortland

The property will feature an escape within the most remote area of the property. Surrounded by the beauty of Lake County rolling hills and streams, the project includes a request for a series of tented campsites and limited accessory structures. This area will offer a seasonal opportunity for a limited number of guests.

TENTED CAMP AREA | LAND USE CLUSTER MAP



COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL

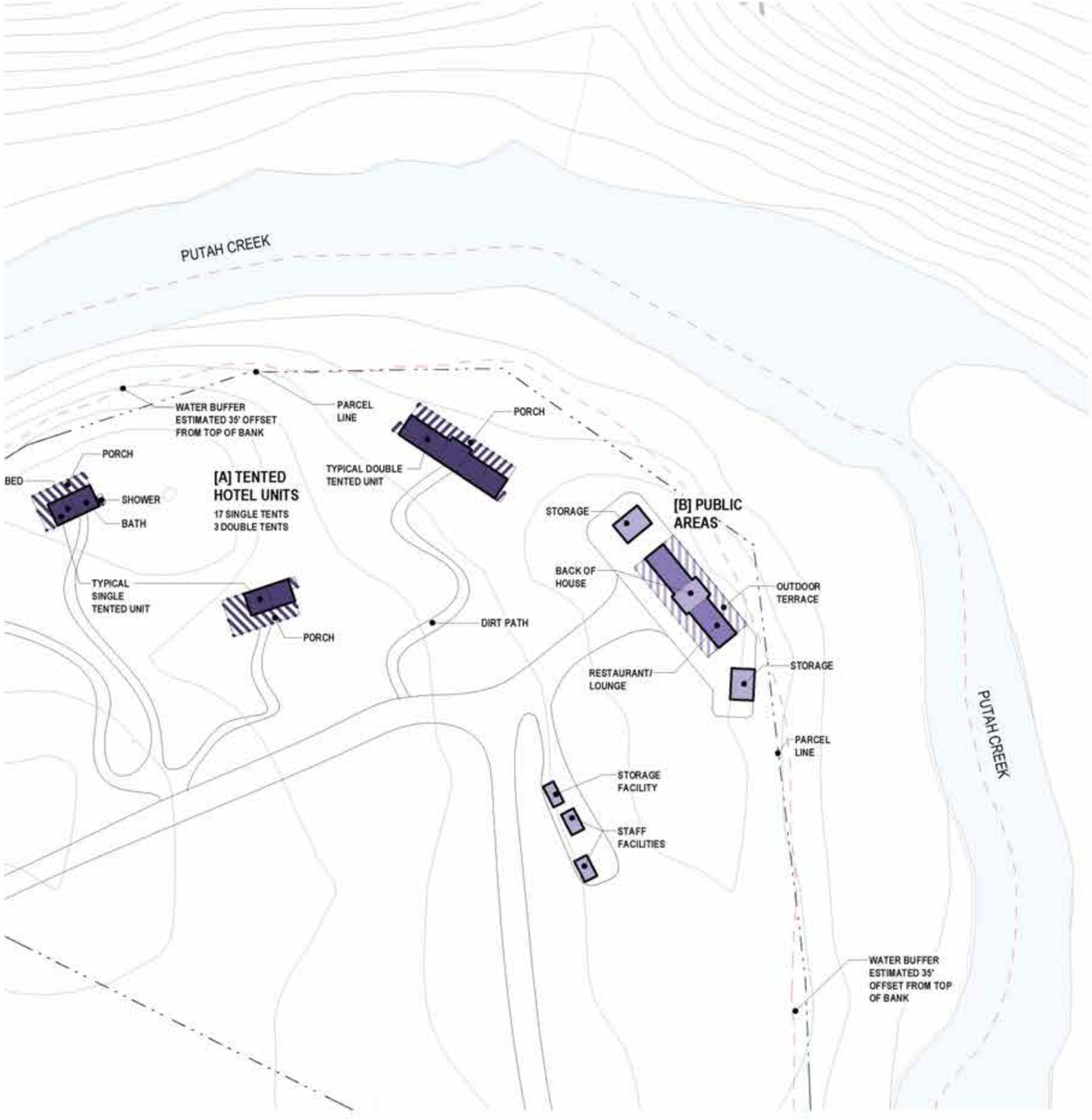
CLUSTER USES

20 [A] HOTEL UNITS
[B] PUBLIC AREAS
COMMUNAL DINNING
SUPPORT FACILITIES

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 150' 300' 600'
ORIGINAL SCALE: 1" = 500'-0"

TENTED CAMP AREA | LAND USE FLOOR PLAN



COLOR LEGEND

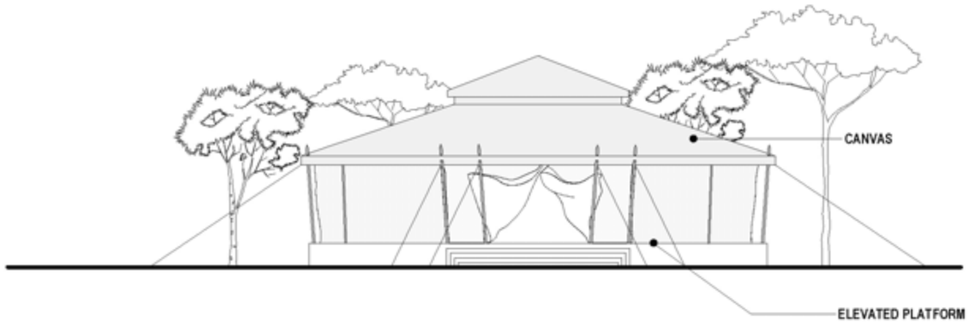
INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

TENTED CAMP

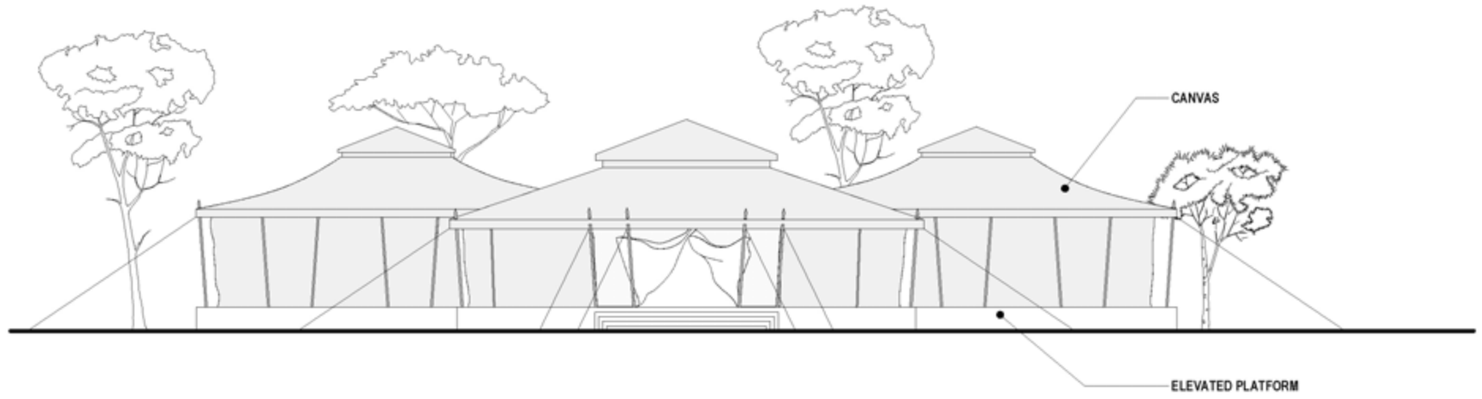
BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] TENTED HOTEL					36,400 SF
	TENTED HOTEL UNIT [20]	HOTEL UNIT	23,000 SF	13,400 SF	
[B] PUBLIC AREAS					6,800 SF
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	1,800 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORT	1,800 SF	2,500 SF	
	STAFF FACILITY	RESORT SUPPORT	500 SF	0 SF	
	STORAGE FACILITY	RESORT SUPPORT	200 SF	0 SF	
GRAND TOTAL					43,200 SF

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 50' 100' 200'
ORIGINAL SCALE: 1" = 100'-0"



SINGLE TENT ELEVATION

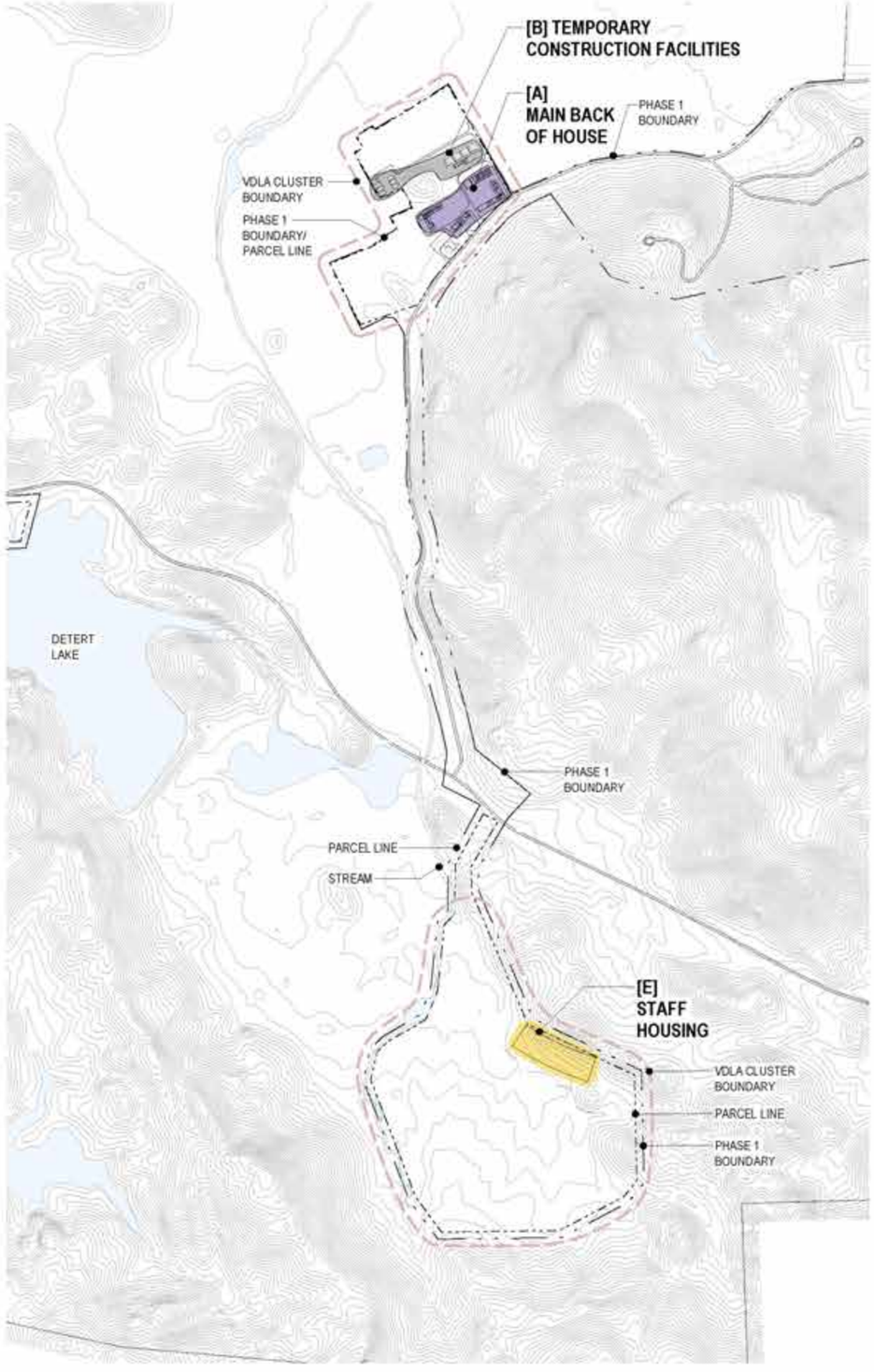


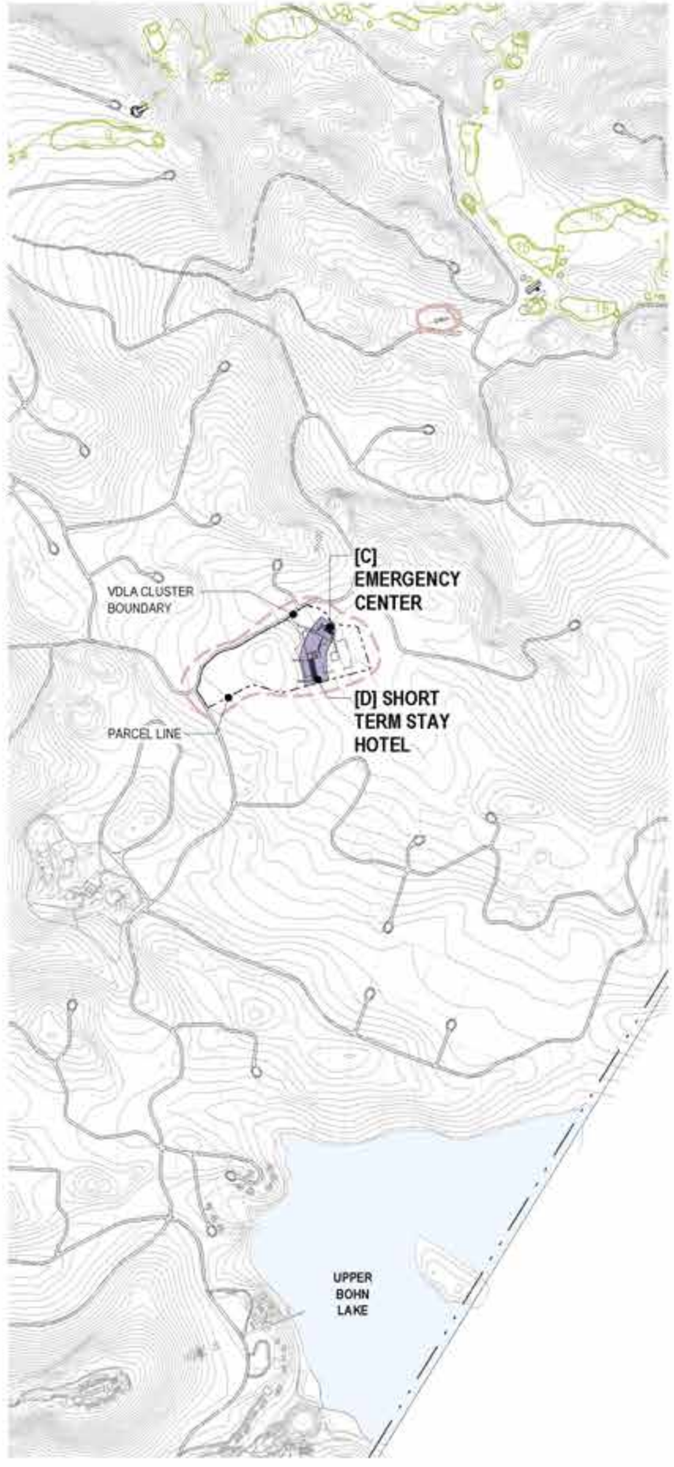
DOUBLE TENT ELEVATION

0' 16' 32' 64'

ORIGINAL SCALE: 1/32" = 1'-0"

SUPPORTING FACILITIES | LAND USE CLUSTER MAPS





COLOR LEGEND

- RESORT - PRIMARY
- RESORT - COMMERCIAL
- RESORT - ACCESSORY
- RESORT - RESIDENTIAL
- RESIDENTIAL - PRIMARY

CLUSTER USES

FACILITIES
- *[A] MAIN BACK OF HOUSE*
- *[B] TEMPORARY CONSTRUCTION FACILITIES*
- *[C] EMERGENCY CENTER*
- *[D] SHORT TERM STAY HOTEL*
- *[E] STAFF HOUSING*

Supporting Facilities | Verse Design LA

The various hotel clusters will be supported by multiple facilities. Workforce housing is designed to be flexible depending on employee demographics. In addition, there is an opportunity for short term overnight stays for employees and guest staff. Most importantly, a strategically placed emergency response center includes a fire response center, emergency medical staff, and a helipad dedicated for emergency purposes. Lastly, for guests choosing to arrive via a float plane or helicopter there is a welcome kiosk and arrival center located conveniently accessed directly from Butts Canyon Road.

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

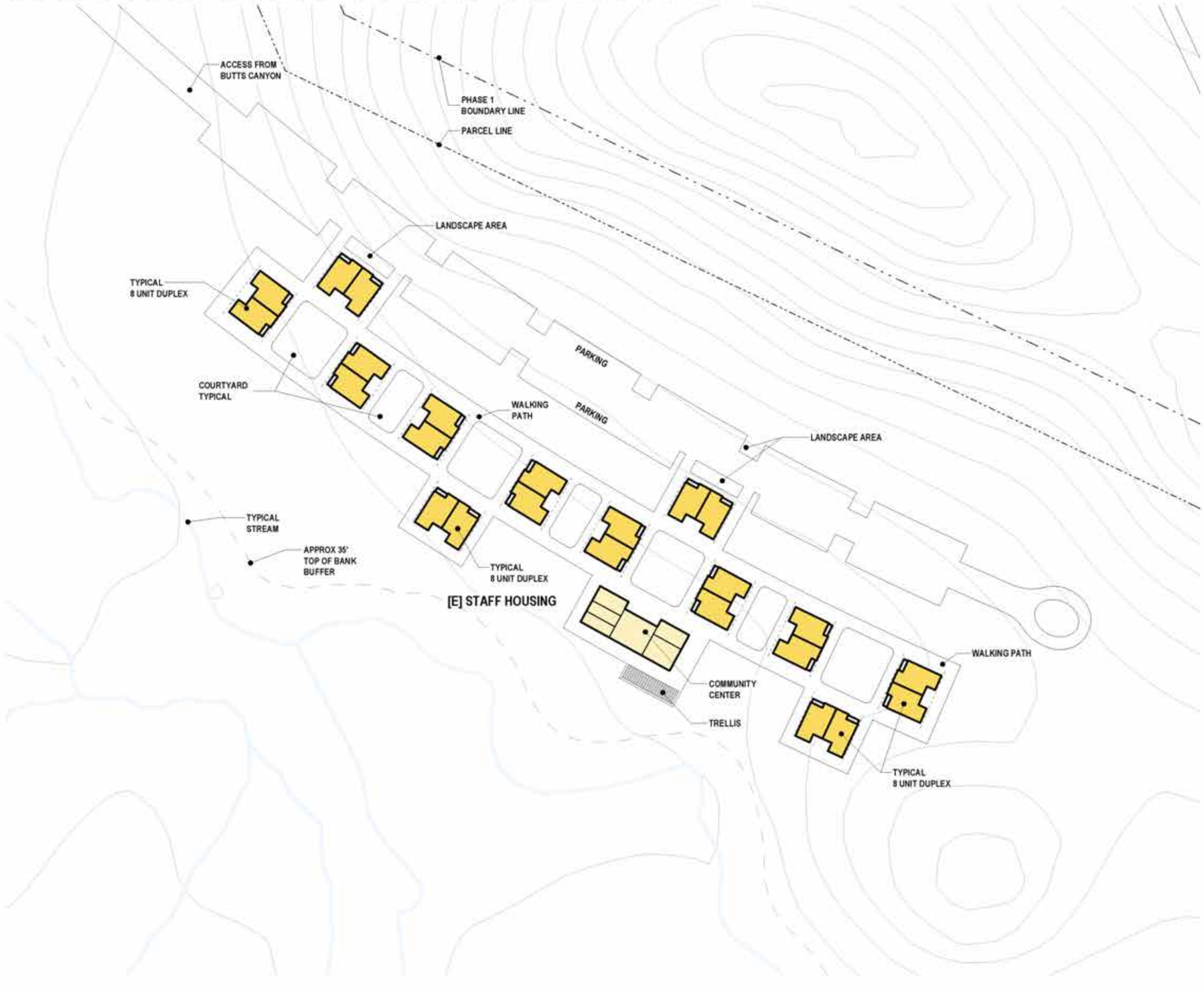
0' 9000' 18000' 36000'
ORIGINAL SCALE: 1" = 1800'-0"

Workforce Housing*

Land and housing costs continue to rise in response to wildfires, economic trends over the past decade, and in particular the demand for housing. Housing, homeownership, and renting has become more expensive throughout Northern California and within the County of Lake. The majority of housing available within the County is limited. Infill housing is a means of providing new housing stock in an area already proximate to public infrastructure. In conjunction with the resort development within Guenoc Valley, The project proposes a mixture of on-and off-site workforce housing for employees. This development will blend into the surrounding area offering ranch-style farmhouse exteriors, maintaining quality architecture, and reflecting positively the surrounding neighborhoods and the character of Lake County.

*Note: A housing unit is defined as a 400 sq. foot bedroom and bathroom. Our proposal indicated workforce housing to be designed as co-living housing structures, built in single-family style residency, with accessory dwelling units. We are proposing 50 parcels to be located off-site at a previously subdivided parcel in Middletown and 35 parcels with residences on-site off of the west side of Butts Canyon Rd.

WORKFORCE HOUSING | LAND USE FLOOR PLAN



COLOR LEGEND	
	RESIDENTIAL - PRIMARY
	RESIDENTIAL - ACCESSORY

[E] STAFF HOUSING & COMMUNITY CENTER

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
STAFF HOUSING					48,000 SF
	HOUSE [24]	RESIDENTIAL	2,000 SF	0 SF	
	* CO-HOUSING UNITS [98]				
COMMUNITY CENTER					4,100 SF
	COMMUNITY CENTER	RESIDENTIAL SUPPORT	4,100 SF	0 SF	
GRAND TOTAL					52,100 SF

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 50' 100' 200'

ORIGINAL SCALE: 1" = 100'-0"

1ST FLOOR PLAN

2ND FLOOR PLAN

STAFF HOUSING ELEVATION

ORIGINAL SCALE: 1/16" = 1'-0"

HARDWOOD FLOORING

COR TEN STEEL

WOOD SIDING

STANDING SEAM METAL

EMERGENCY CENTER & SHORT TERM STAY | LAND USE FLOOR PLAN

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

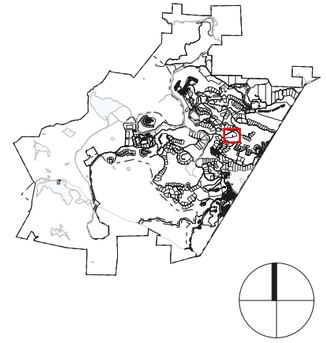
EMERGENCY CENTER AND ENTOURAGE HOUSING 1

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[C] EMERGENCY CENTER					17,200 SF
	BATHROOM	RESORT SUPPORTING	300 SF	0 SF	
	CIRCULATION	RESORT SUPPORTING	800 SF	0 SF	
	DAYROOM	RESORT SUPPORTING	2,000 SF	0 SF	
	DORM	RESORT SUPPORTING	1,000 SF	0 SF	
	ENGINE AREA	RESORT SUPPORTING	8,800 SF	0 SF	
	GYM	RESORT SUPPORTING	500 SF	0 SF	
	HOSE STORAGE	RESORT SUPPORTING	100 SF	0 SF	
	LAUNDRY	RESORT SUPPORTING	200 SF	0 SF	
	LOCKERS	RESORT SUPPORTING	200 SF	0 SF	
	MECH/ELEC	RESORT SUPPORTING	200 SF	0 SF	
	MEDICAL EXAM	RESORT SUPPORTING	200 SF	0 SF	
	MEDICAL OFFICE	RESORT SUPPORTING	200 SF	0 SF	
	MEETING ROOM	RESORT MANAGEMENT	500 SF	0 SF	
	OFFICE	RESORT MANAGEMENT	400 SF	0 SF	
	OUTDOOR PATIO	RESORT SUPPORTING	0 SF	600 SF	
	PPE STORAGE	RESORT SUPPORTING	200 SF	0 SF	
	RESTROOM	RESORT SUPPORTING	200 SF	0 SF	
	SHOP MAINT	RESORT SUPPORTING	300 SF	0 SF	
	STORAGE	RESORT SUPPORTING	200 SF	0 SF	
	TRASH	RESORT SUPPORTING	300 SF	0 SF	
[D] SHORT TERM STAFF HOUSING					28,700 SF
	HOTEL ROOM [50]	HOTEL UNIT	22,200 SF	0 SF	
	RESTAURANT/LOUNGE	FOOD & BEVERAGE	1,000 SF	0 SF	
	MEETING ROOM	RESORT MANAGEMENT	300 SF	0 SF	
	OFFICE/BATH	RESORT MANAGEMENT	2,300 SF	0 SF	
	RECEPTION	RESORT MANAGEMENT	700 SF	0 SF	
	BACK OF HOUSE	RESORT SUPPORTING	1,500 SF	0 SF	
	GYM	RECREATION	600 SF	0 SF	
GRAND TOTAL					45,900 SF

DESCRIPTION

The Emergency Center will continue the provincial and functional principles of the main back of house program, to facilitate the practical needs of the Emergency Center. The material palette will be integrated with the Back of House buildings throughout the site. The fire center will include a structure to house firefighting equipment, as well as a headquarters space in the case of emergency. It will also house minor medical supplies and a helipad location for emergency services.

Staff short term Housing, also referred to as, the Entourage Hotel, the design will reflect the barn vernacular used elsewhere to convey a sophisticated but restrained aesthetic with refined detailing and finishes. This, the most modest of hotels in the development, will serve event support personnel and guests and will echo The Project's characteristic respect for the land with thoughtful site placement and a minimal footprint. Communal spaces will orient to views of the rural landscape offering both indoor and outdoor resting space.



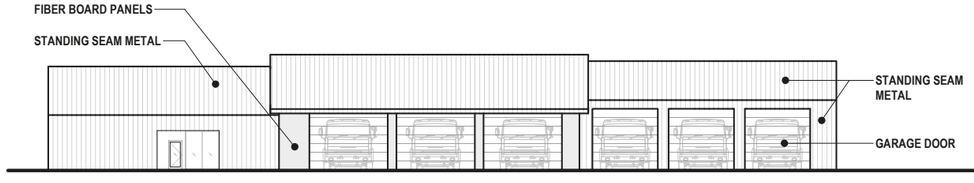
NOTE

Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

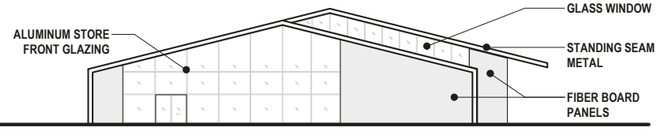
0' 50' 100' 200'

ORIGINAL SCALE: 1" = 100'-0"

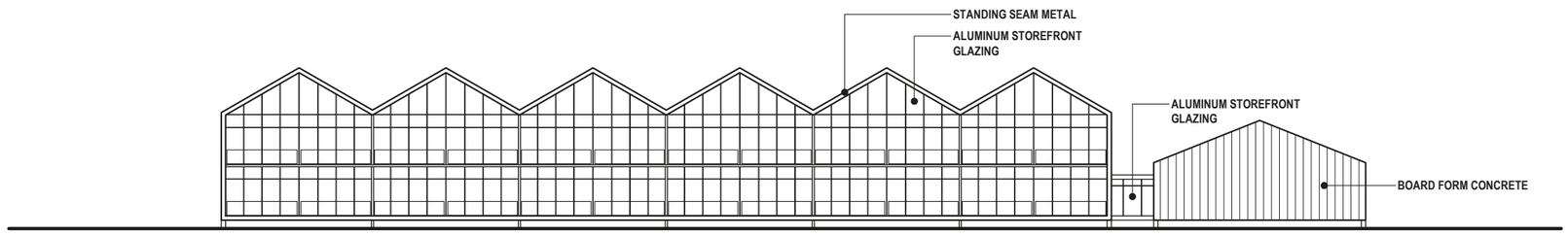
EMERGENCY CENTER & SHORT TERM STAY | ELEVATIONS



FIRE STATION WEST ELEVATION



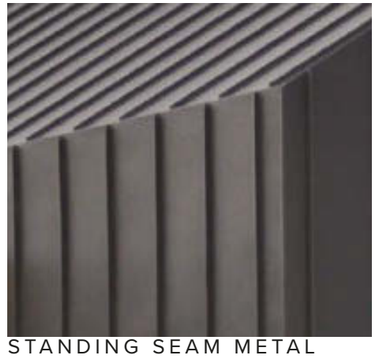
FIRE STATION NORTH ELEVATION



SHORT TERM STAFF HOUSING EAST ELEVATION

0' 16' 32' 64'

BOARD FORM CONCRETE



STANDING SEAM METAL

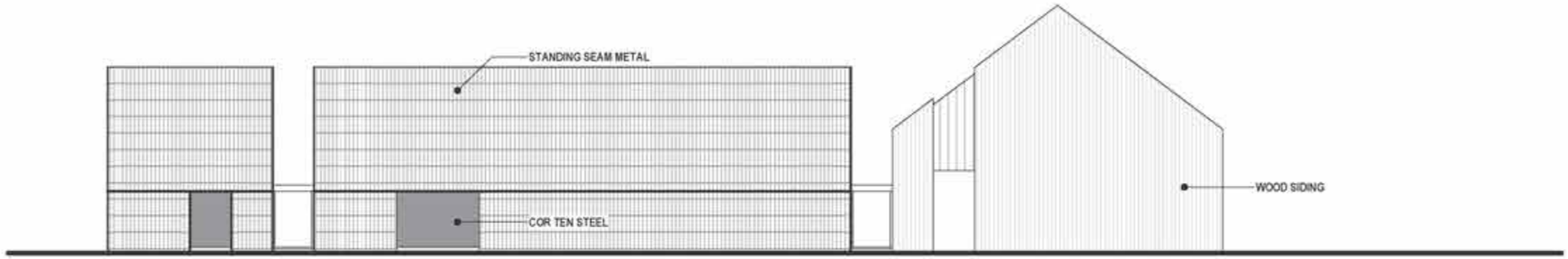
COR TEN STEEL

GABION WALL

Central Back-of-House Operations | Verse Design LA

Back of House - This campus of buildings serves as the heart of operations for the development, including laundry facilities, accounting, receiving and maintenance headquarters. Back of House buildings are provincial and functional structures that integrate modest, industrial, and raw materials with strategic detailing to introduce a reverie where the agrarian meets contemporary, and the pastoral meets the pragmatic.

CENTRAL BACK OF HOUSE | ELEVATIONS



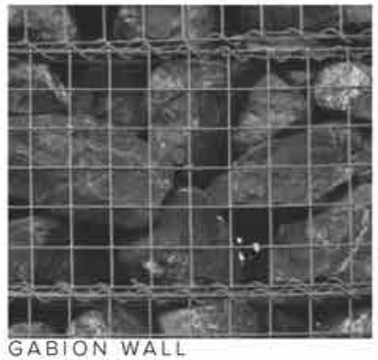
MAIN BACK OF HOUSE PUBLIC BUILDINGS SOUTH ELEVATION

MAIN BACK OF HOUSE SERVICE BUILDINGS SOUTH ELEVATION

0' 16' 32' 64'

ORIGINAL SCALE: 1/32" = 1'-0"

COR TEN STEEL

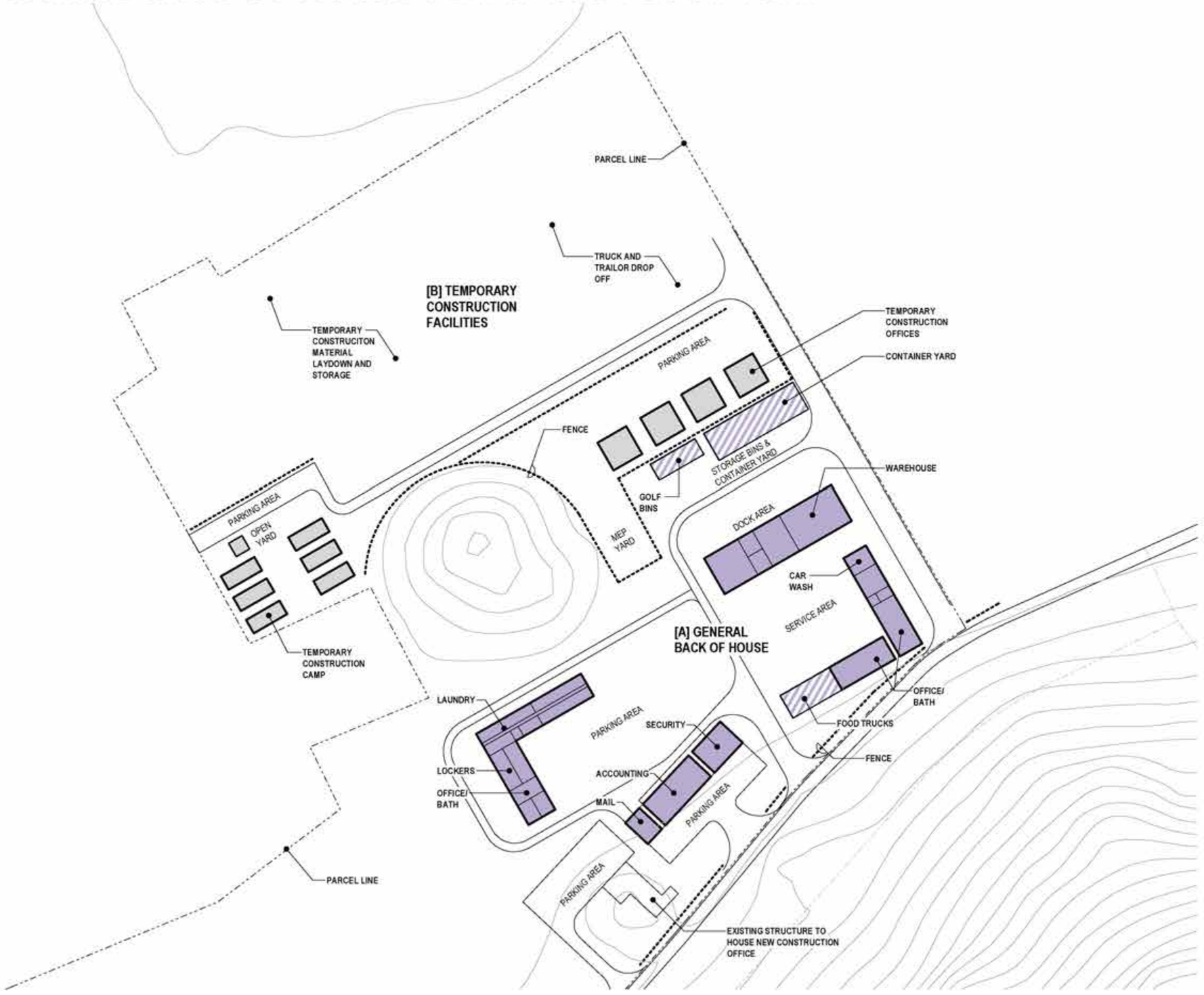


GABION WALL

WOOD SIDING

STANDING SEAM METAL

CENTRAL BACK OF HOUSE | LAND USE FLOOR PLAN



COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY
		CONSTRUCTION - TEMPORARY

CENTRAL BACK OF HOUSE

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
[A] GENERAL BACK OF HOUSE					
	OFFICE/BATH	RESORT MANAGEMENT	17,600 SF	0 SF	
	ACCOUNTING	RESORT SUPPORTING	8,600 SF	0 SF	
	CAR WASH	RESORT SUPPORTING	6,100 SF	0 SF	
	LAUNDRY	RESORT SUPPORTING	12,900 SF	0 SF	
	LOCKERS	RESORT SUPPORTING	5,200 SF	0 SF	
	MAIL	RESORT SUPPORTING	2,600 SF	0 SF	
	SECURITY	RESORT SUPPORTING	5,300 SF	0 SF	
	WAREHOUSE	RESORT SUPPORTING	25,100 SF	0 SF	
	CONTAINER YARD	RESORT SUPPORTING	0 SF	13,200 SF	
	FOOD TRUCKS	RESORT SUPPORTING	0 SF	6,000 SF	
	GOLF BINS	RESORT SUPPORTING	0 SF	3,800 SF	
[B] TEMPORARY CONSTRUCTION FACILITIES					
	TEMP. CONSTR. OFFICE	CONSTRUCTION	17,500 SF	0 SF	
	TEMP. CONSTR. CAMP	CONSTRUCTION	15,900 SF	0 SF	
GRAND TOTAL					139,800 SF

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 100' 200' 400'

ORIGINAL SCALE: 1" = 200'-0"

Aerial Site Access - Verse Design LA

Being swept away from the bustling work life to a smooth and simple arrival on the Maha farms reservoir, our seaplane dock, and helicopter landing zone will be available on all pre-arrivals with our dedicated staff and chauffeur whisking you to your resort and or home within a few minutes after landing.

AERIAL SITE ACCESS | USE PLAN

COLOR LEGEND

INDOOR	OUTDOOR	
		RESORT - PRIMARY
		RESORT - COMMERCIAL
		RESORT - ACCESSORY

AERIAL SITE ACCESS

BUILDING NAME	SPECIFIC USE	GENERAL USE	INDOOR	OUTDOOR	TOTAL
	RECEPTION FALICITY	RESORT SUPPORT	1,400 SF	0 SF	
	RECEPTION DECK	RESORT SUPPORT	0 SF	2,100 SF	
GRAND TOTAL					3,500 SF

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 75' 150' 300'

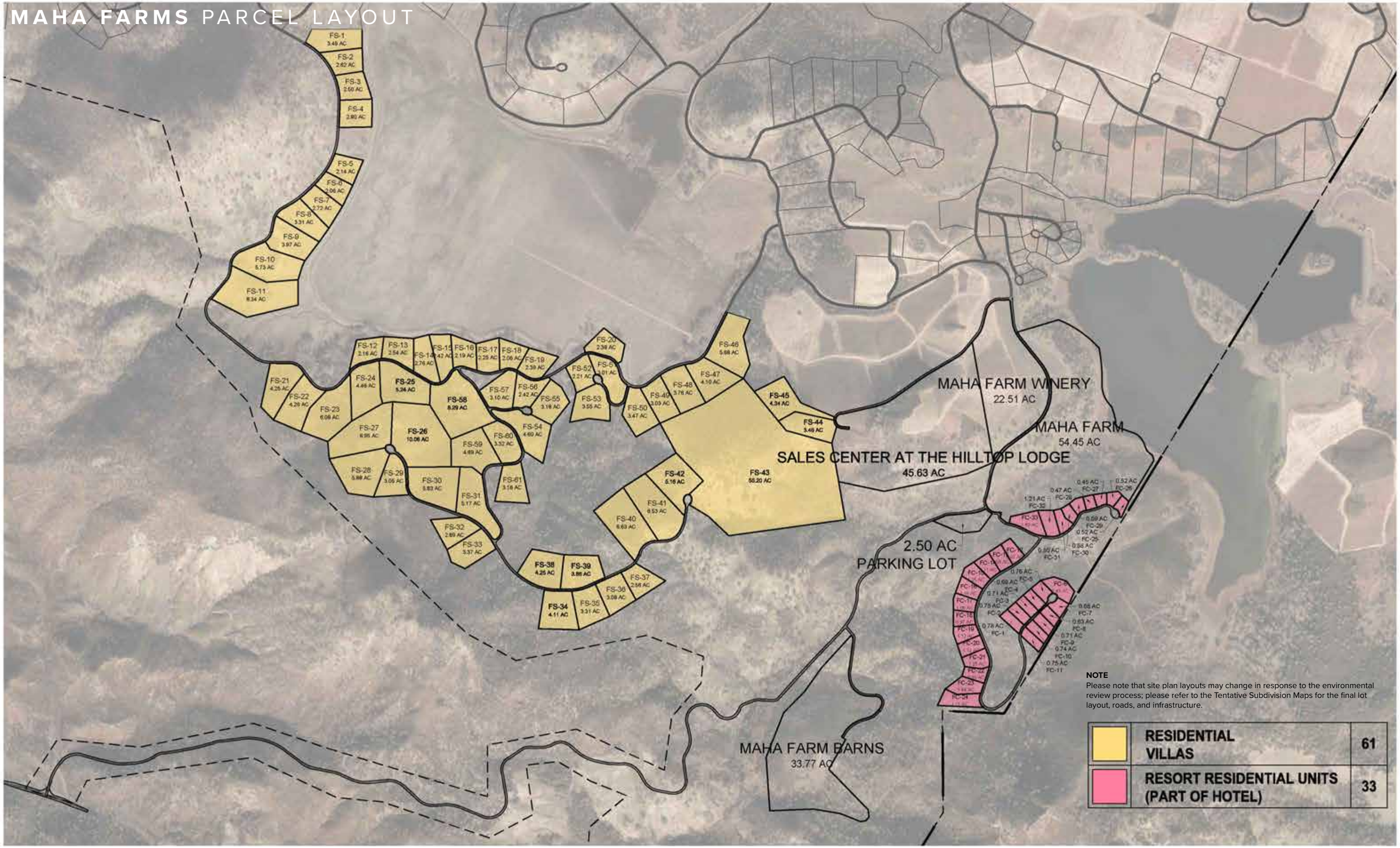
ORIGINAL SCALE: 1" = 150'-0"

SECTION 4 SUBDIVISION PLANS

SUBDIVISION PLANS

The project proposes multiple tentative subdivision maps submitted under separate cover. The following sheets coorespond to the subdivision phasing and show the lot layouts for all new parcels. Please note these plans do not include the siting of construction and the area planned for conservation or easements. These plans depict accurate road layouts and parcel configurations; more detailed site analysis is included in the tentative subdivison application.

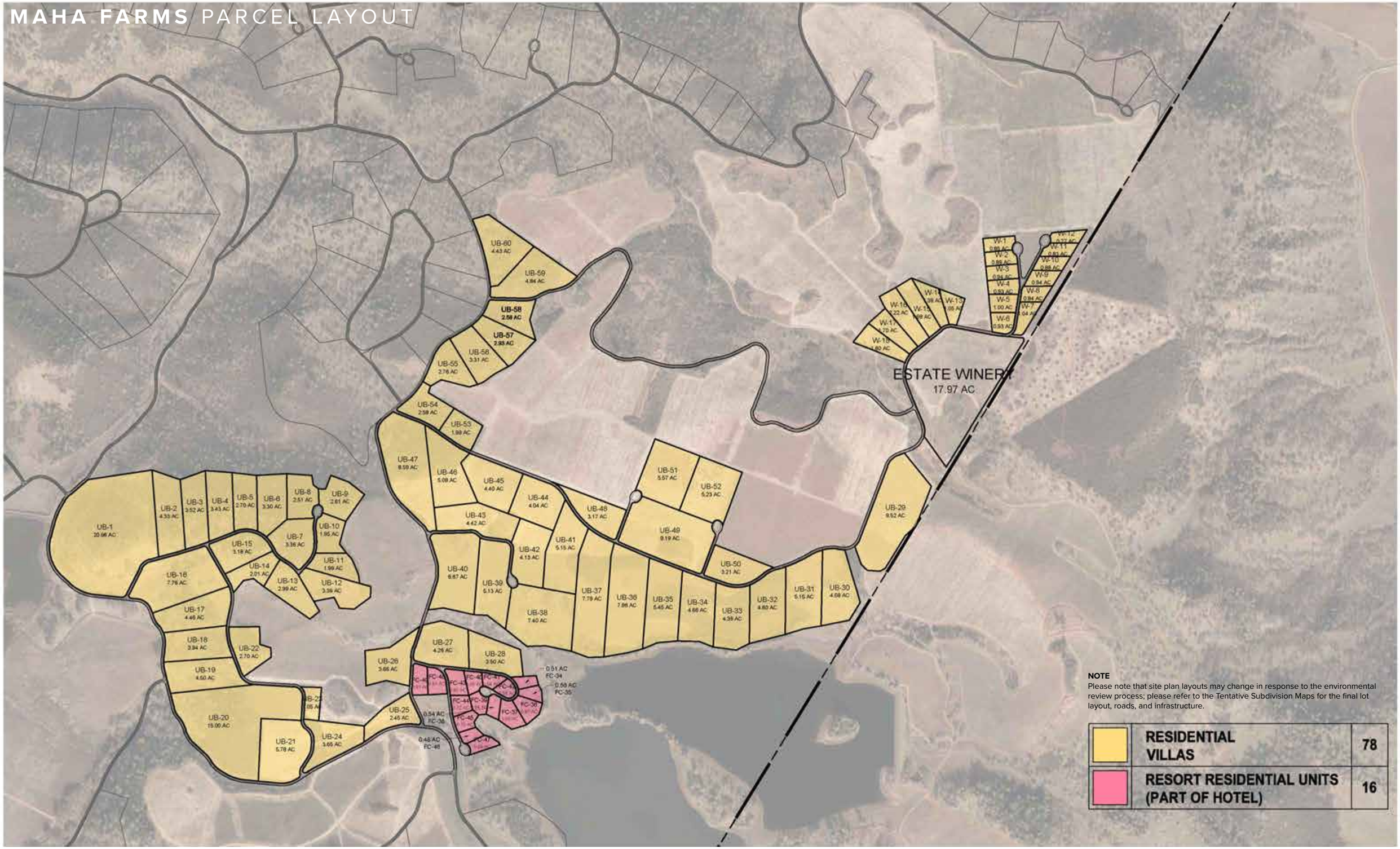
MAHA FARMS PARCEL LAYOUT



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

	RESIDENTIAL VILLAS	61
	RESORT RESIDENTIAL UNITS (PART OF HOTEL)	33

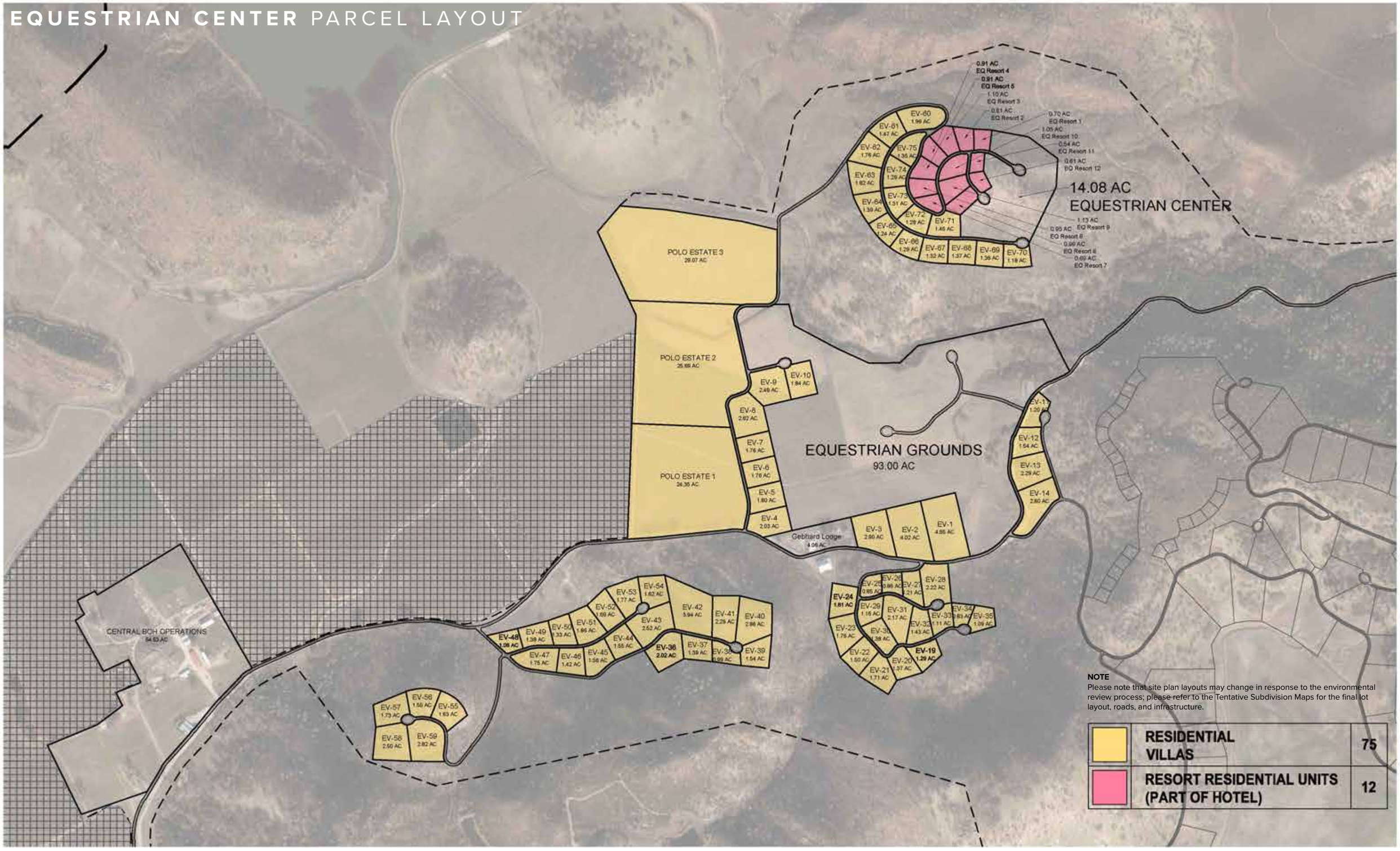
MAHA FARMS PARCEL LAYOUT



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

	RESIDENTIAL VILLAS	78
	RESORT RESIDENTIAL UNITS (PART OF HOTEL)	16

EQUESTRIAN CENTER PARCEL LAYOUT



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

	RESIDENTIAL VILLAS	**75**
	RESORT RESIDENTIAL UNITS (PART OF HOTEL)	**12**

DENNISTON GOLF ESTATES PARCEL LAYOUT

	RESIDENTIAL VILLAS	88
	RESORT RESIDENTIAL UNITS (PART OF HOTEL)	40

HENNESY BARN PUBLIC RANCH
27.77 AC

RED HILL ESTATES
30.62 AC

6.36 AC
GOLF BLDG 1

T5-2
33.01 AC

T5-3
29.09 AC

T5-4
30.71 AC

T5-5
25.97 AC

T5-6
33.22 AC

T5-7
55.47 AC

T5-8
55.91 AC

T5-9
48.72 AC

T5-10
50.64 AC

GOLF 4
153.18 AC

GOLF 2
86.33 AC

GOLF 3
155.12 AC

4.55 AC
GOLF BLDG 2

GOLF 1
81.15 AC

3.79 AC
GOLF MAINTENANCE 2

1.02 AC
GOLF 7

0.95 AC
GOLF MAINTENANCE 1

2.37 AC
GOLF 5

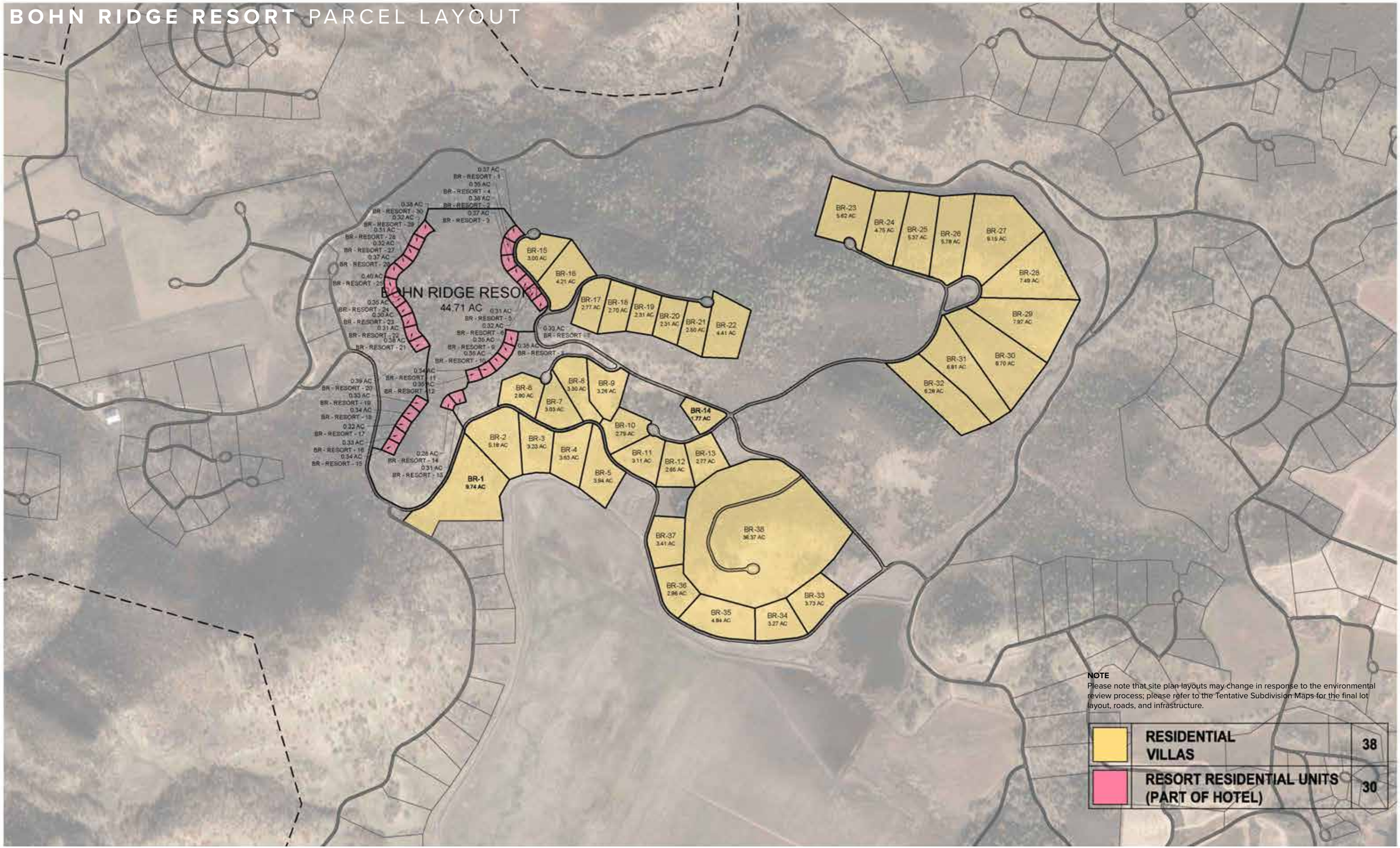
GOLF 8
2.72 AC

4.84 AC
CLUB HOUSE AND PADDOCK

3.42 AC
RANCH MANAGER PADDOCK

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

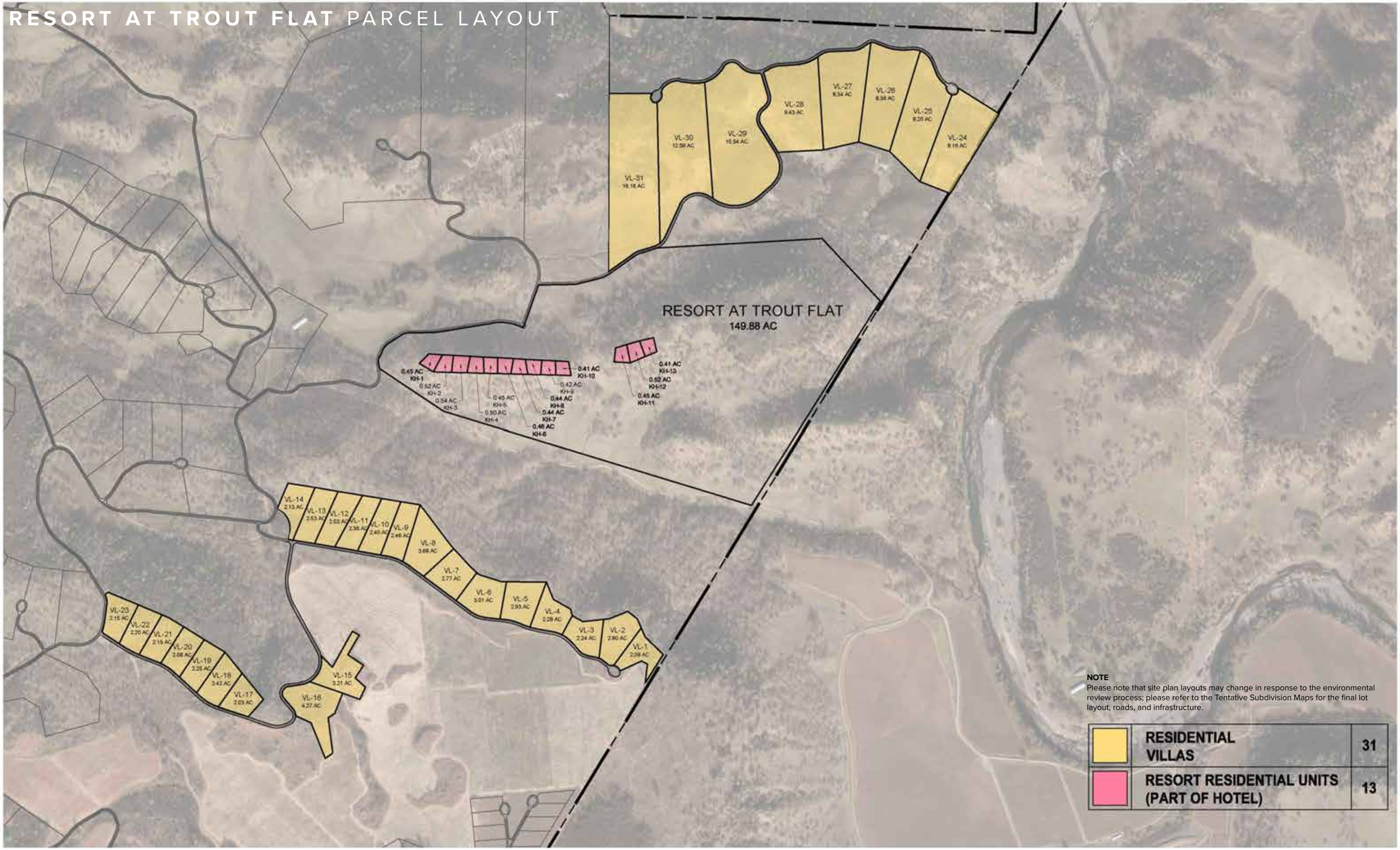
BOHN RIDGE RESORT PARCEL LAYOUT



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

RESIDENTIAL VILLAS	38
RESORT RESIDENTIAL UNITS (PART OF HOTEL)	30

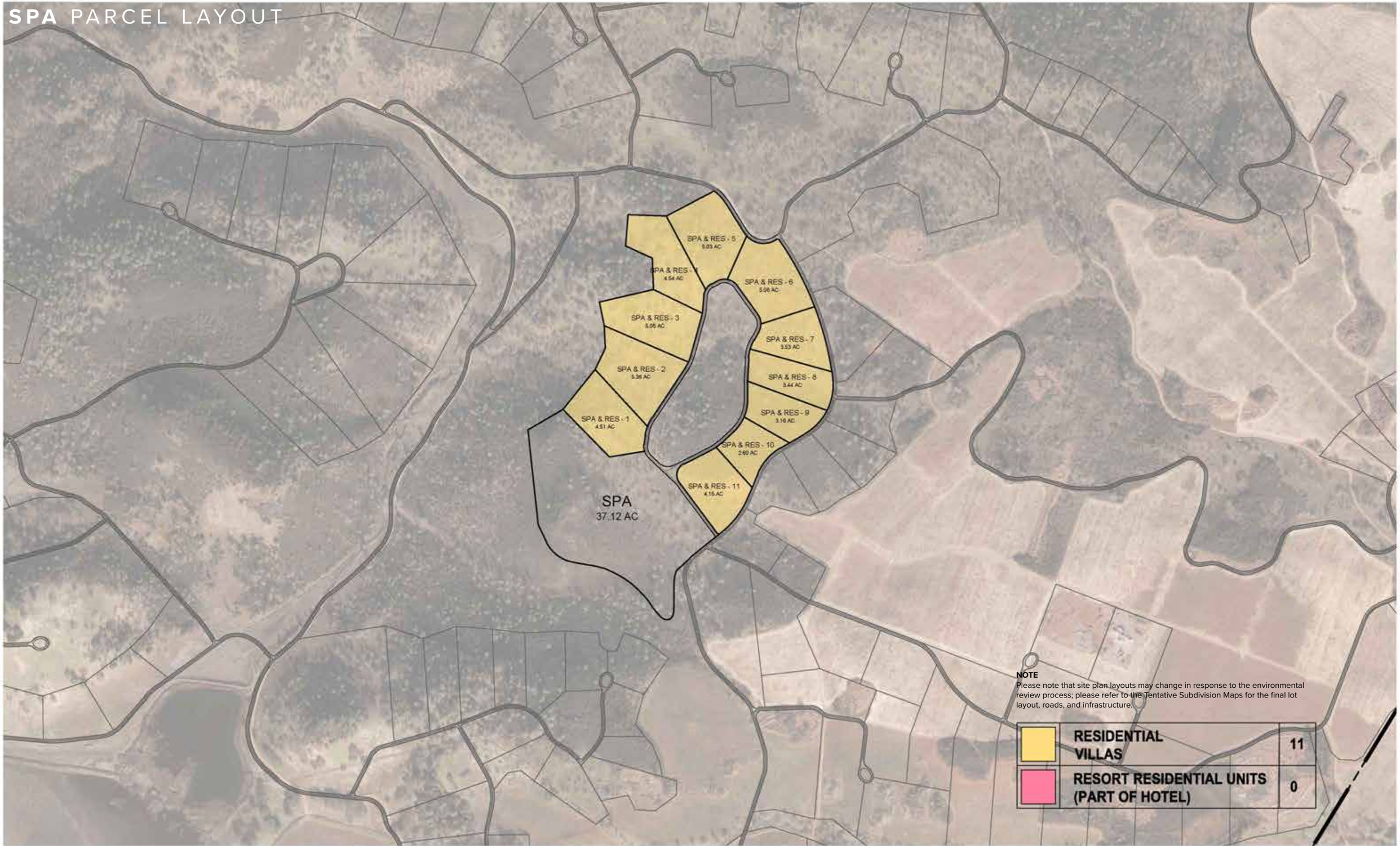
RESORT AT TROUT FLAT PARCEL LAYOUT



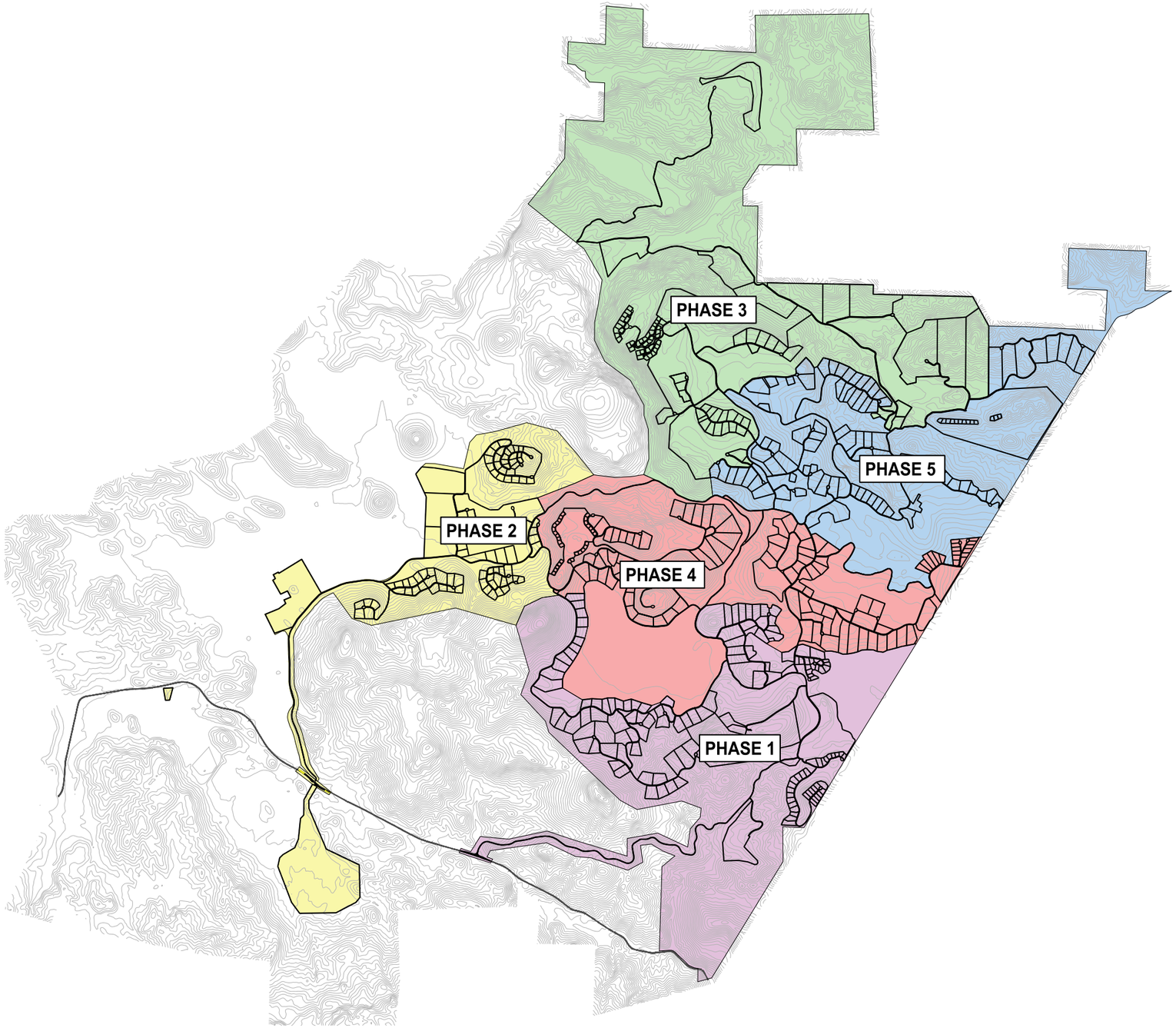
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

	RESIDENTIAL VILLAS	31
	RESORT RESIDENTIAL UNITS (PART OF HOTEL)	13

SPA PARCEL LAYOUT



SECTION 5 UTILITIES & INFRASTRUCTURE



POTENTIAL DEVELOPMENT PHASING

IMPLEMENTATION AND PHASING

The first phase of construction will include primary resort facilities as well as supporting infrastructure such as roads, utilities and support services. This figure describes the most likely construction phasing. However, construction will be based on market demand.

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

CIRCULATION

The circulation system for the first phase of the Proposed project would comprise a system of primary and secondary vehicular two-way roads and would serve as multimodal circulation routes providing shared access to standard vehicles, minor commercial delivery vehicles, emergency response vehicles, recreational vehicles and bicycles. Equestrian and pedestrian use would be accommodated separately via alternative pathways and trails.

A non-vehicular circulation system would comprise a system of off-road trails traversing more rugged terrain that would be developed for use with hiking, horseback, and mountain bike riding. Additionally, existing and proposed gravel and fire roads would be utilized and maintained for landscape fuel reduction, corridors for moving grazing animals, and wildland fire protection.

Primary access to the project site is from Butts Canyon Road. A new entrance for resident and guest access would be located at a designated site along Butts Canyon Road. All new intersections would include turning lanes and deceleration/acceleration lanes as needed. A traffic study is currently under way that will outline further improvements to the intersections/entrances (signalization, stop signs, traffic-calming measures, etc.). Additionally, air transportation/arrival will be provided via a guest helipad and a float plane dock, with kiosk and internal transportation services, to be constructed on Guenoc Lake at Detert Reservoir. Additionally, an emergency heliport will be centrally located at the on-site Emergency Response Center.

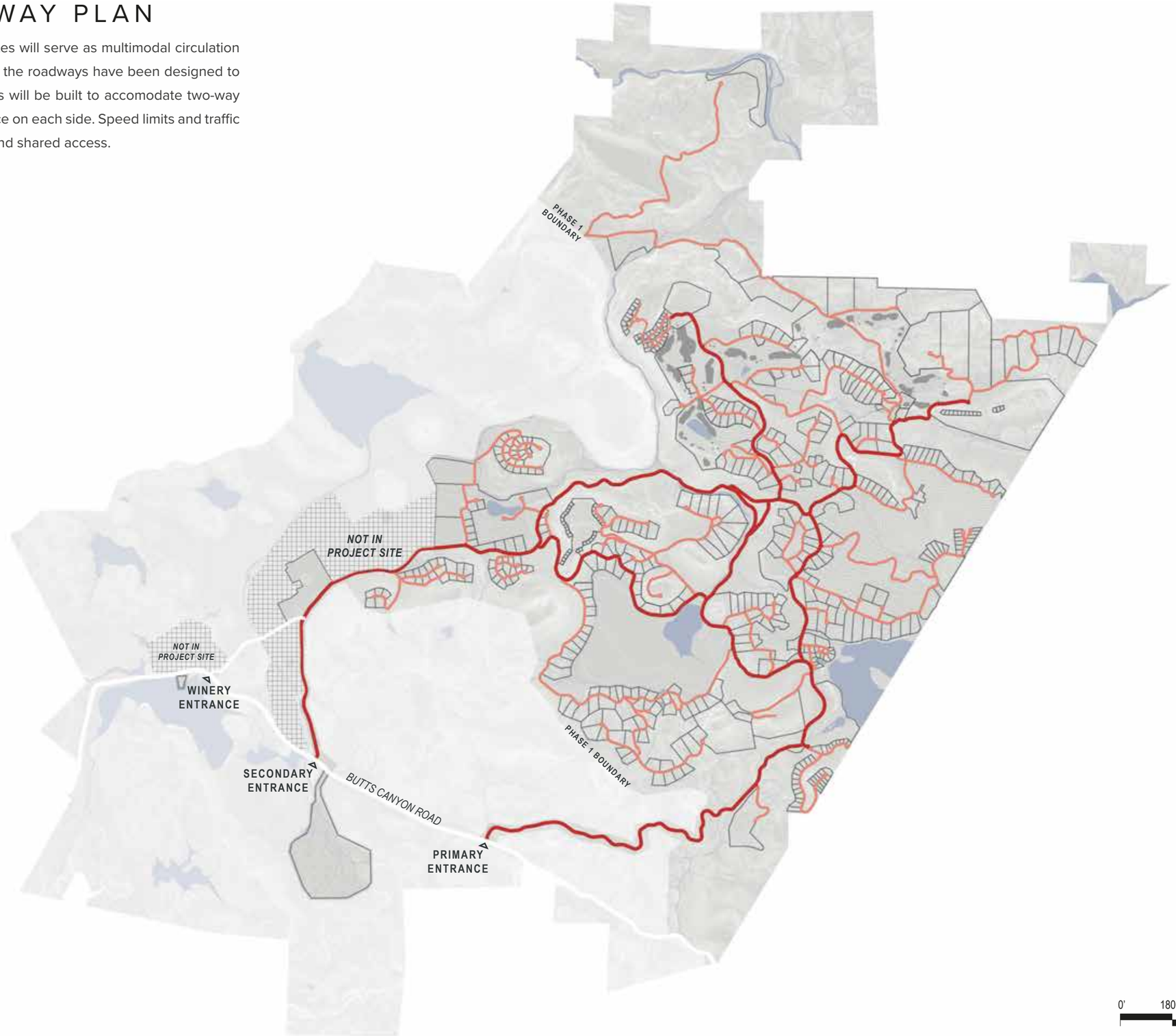
The existing intersection at Guenoc Road would be primarily used by staff and deliveries. A further access point would also extend from the proposed back of house facility westward along Butts Canyon Road, adjacent to Detert Reservoir, to converge with Guenoc Road and then run westward toward the Phase I project. At each of these two intersection locations, traffic and circulation improvements on Butts Canyon Road would be incorporated for improved safety, pending further traffic analysis.

CIRCULATION ROADWAY PLAN

The primary and secondary vehicular circulation routes will serve as multimodal circulation routes to provide access for standard vehicles. All of the roadways have been designed to be sensitive to the existing natural terrain. The roads will be built to accomodate two-way traffic lanes with a maintained 50 feet defensible space on each side. Speed limits and traffic calming techniques will be relied on to ensure safe and shared access.

PRIMARY ROADWAYS

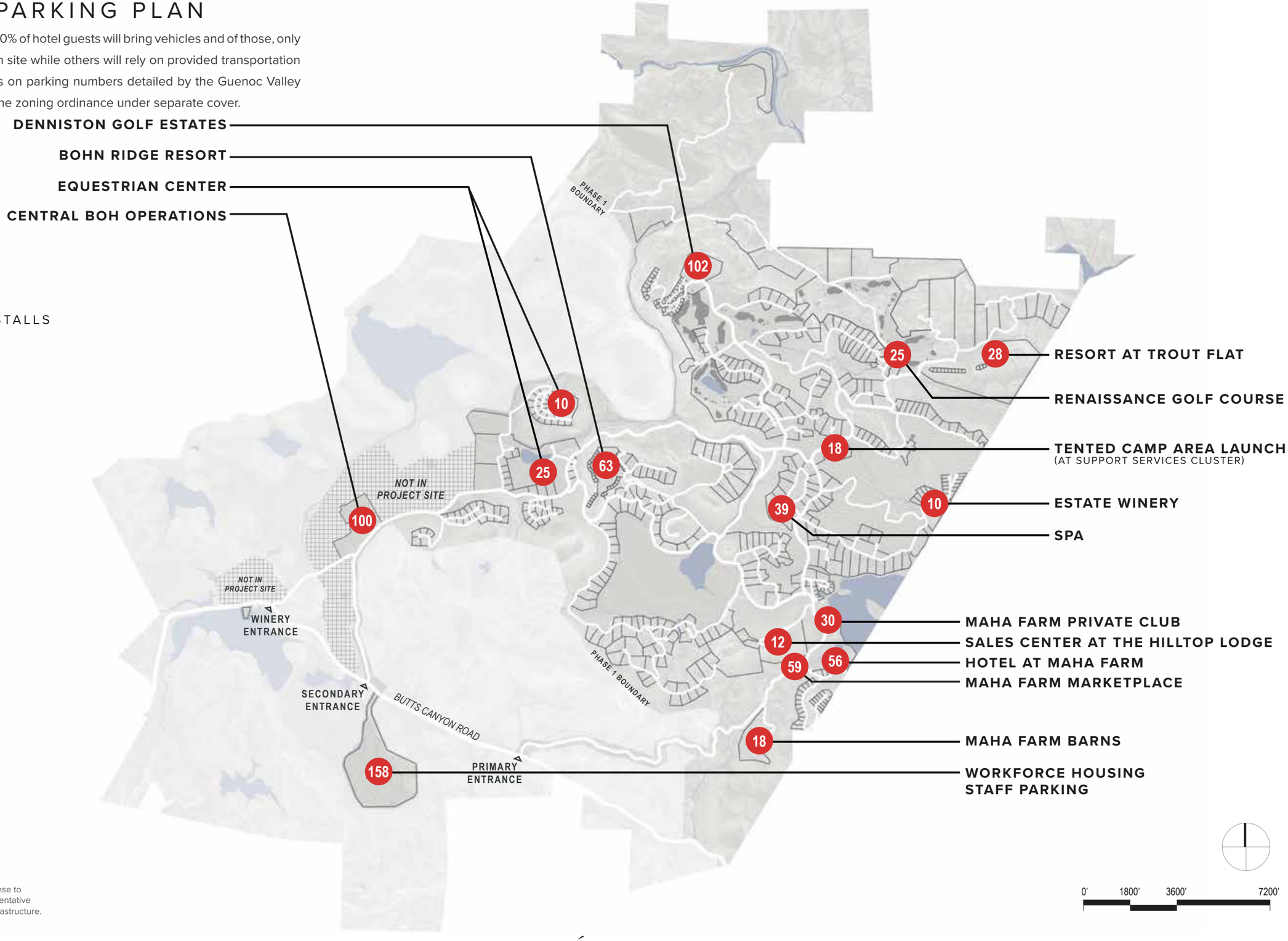
SECONDARY ROADWAYS



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

CIRCULATION PARKING PLAN

Based on commensurate resorts, only 40% of hotel guests will bring vehicles and of those, only half will choose to use their vehicles on site while others will rely on provided transportation services. Therefore, the property relies on parking numbers detailed by the Guenoc Valley District parking code, as described in the zoning ordinance under separate cover.

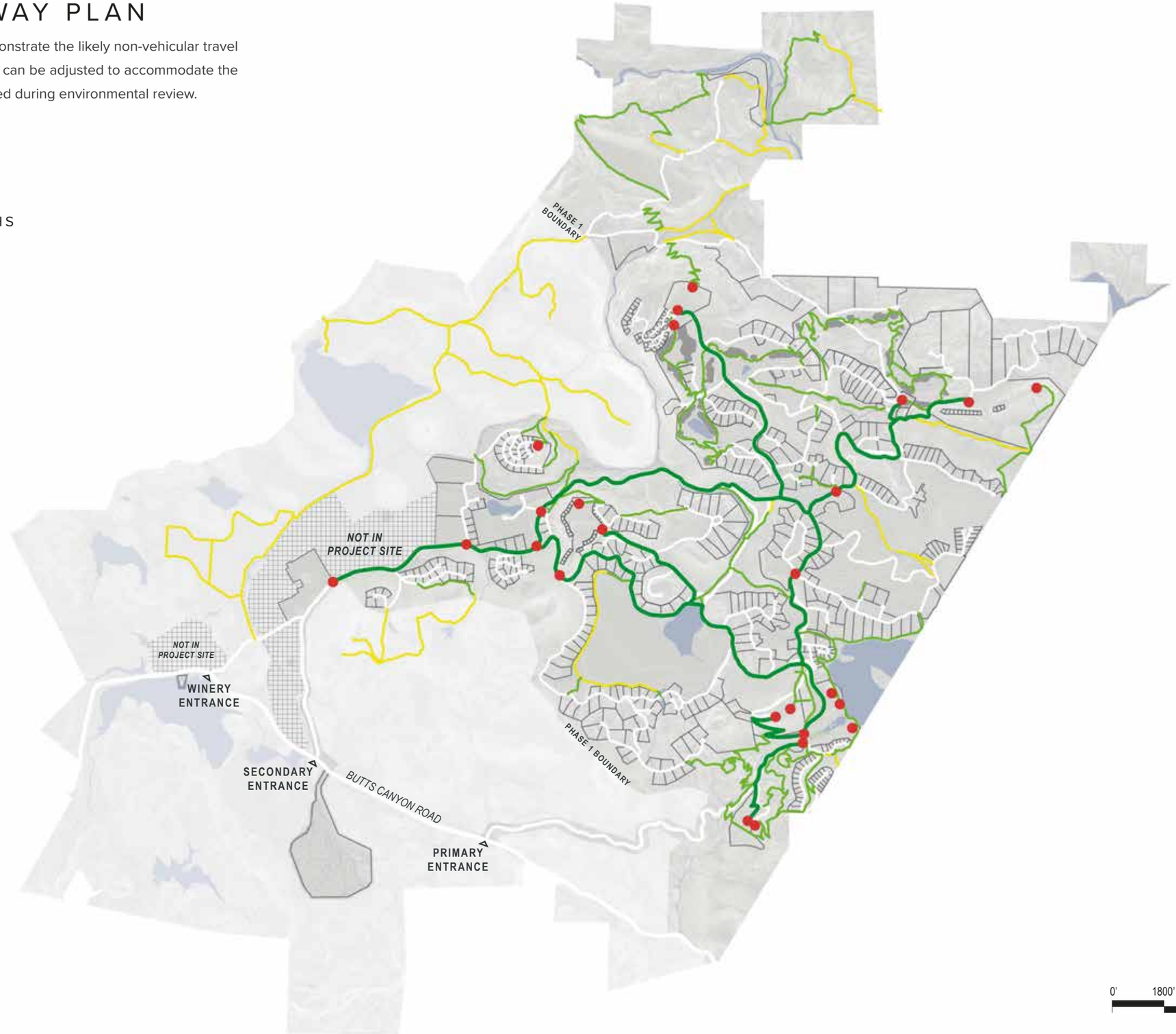


NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

CIRCULATION PATHWAY PLAN

This conceptual pathway network is intended to demonstrate the likely non-vehicular travel routes and connections throughout the site. All paths can be adjusted to accommodate the protection of sensitive and protected species identified during environmental review.

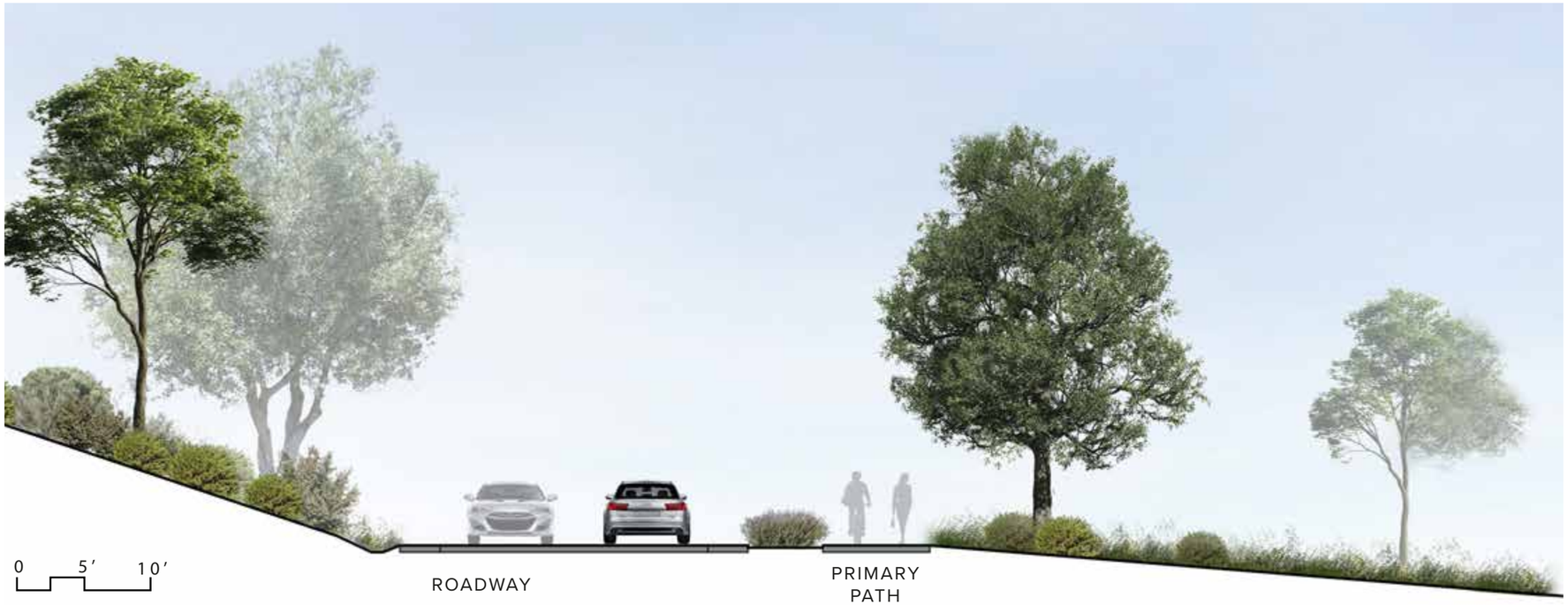
- PRIMARY NEW PATHS *(ADJACENT TO PRIMARY ROADWAYS)*
- SECONDARY NEW TRAILS
- SECONDARY EXISTING TRAILS
- CONNECTION TO RESORT PATHS



0' 1800' 3600' 7200'

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

CIRCULATION PATHWAY TYPICAL CONDITIONS



PRIMARY PATH

SLOPE RANGE
0% - 8%

WIDTH RANGE
4' - 6'

SURFACE
Permeable Pavement

PURPOSE and CONDITIONS
Provide convenient pedestrian and bicycling routes to access resorts and amenities.

Pathway situated adjacent to primary roadway network; pathway separates vehicular and non-vehicular users on these more heavily-travelled routes.

SECONDARY TRAIL

SLOPE RANGE
0% - 15%

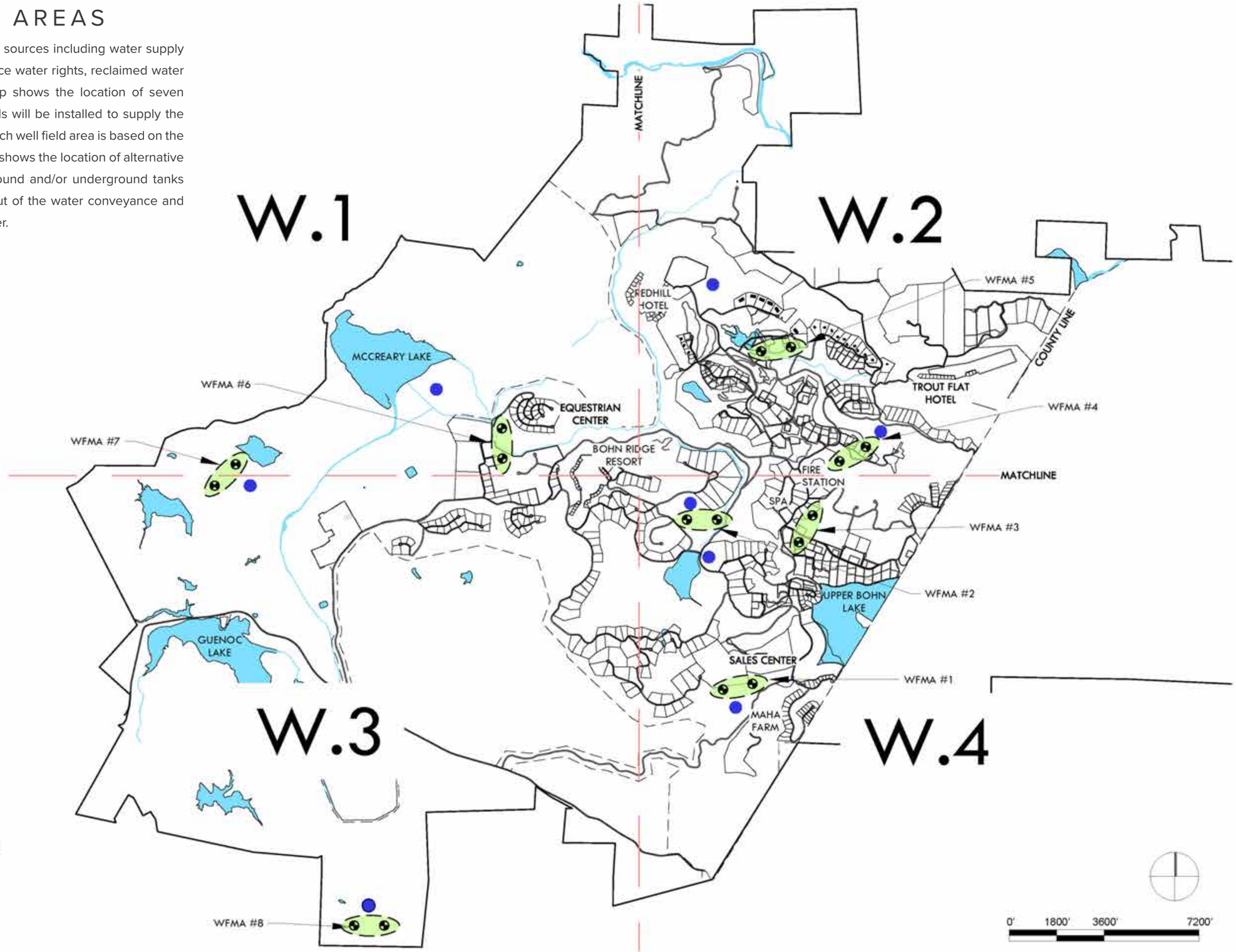
WIDTH RANGE
5' - 15'

SURFACE
Dirt/Gravel

PURPOSE and CONDITIONS
Re-utilize and expand upon existing ranch road network to provide recreational walking, running, hiking, biking, and horseback riding opportunities.

WATER MANAGEMENT AREAS

The project will be supplied by a combination of water sources including water supply wells for domestic purposes, reliance on existing surface water rights, reclaimed water from on-site treatment, and irrigation wells. The map shows the location of seven well fields where two or more, deep water supply wells will be installed to supply the domestic water supply to the project. The location of each well field area is based on the yield of test wells completed on the property. The plan shows the location of alternative water storage reservoirs that could include above ground and/or underground tanks or cisterns. The plans also show the conceptual layout of the water conveyance and distribution lines for both potable and non-potable water.



LEGEND

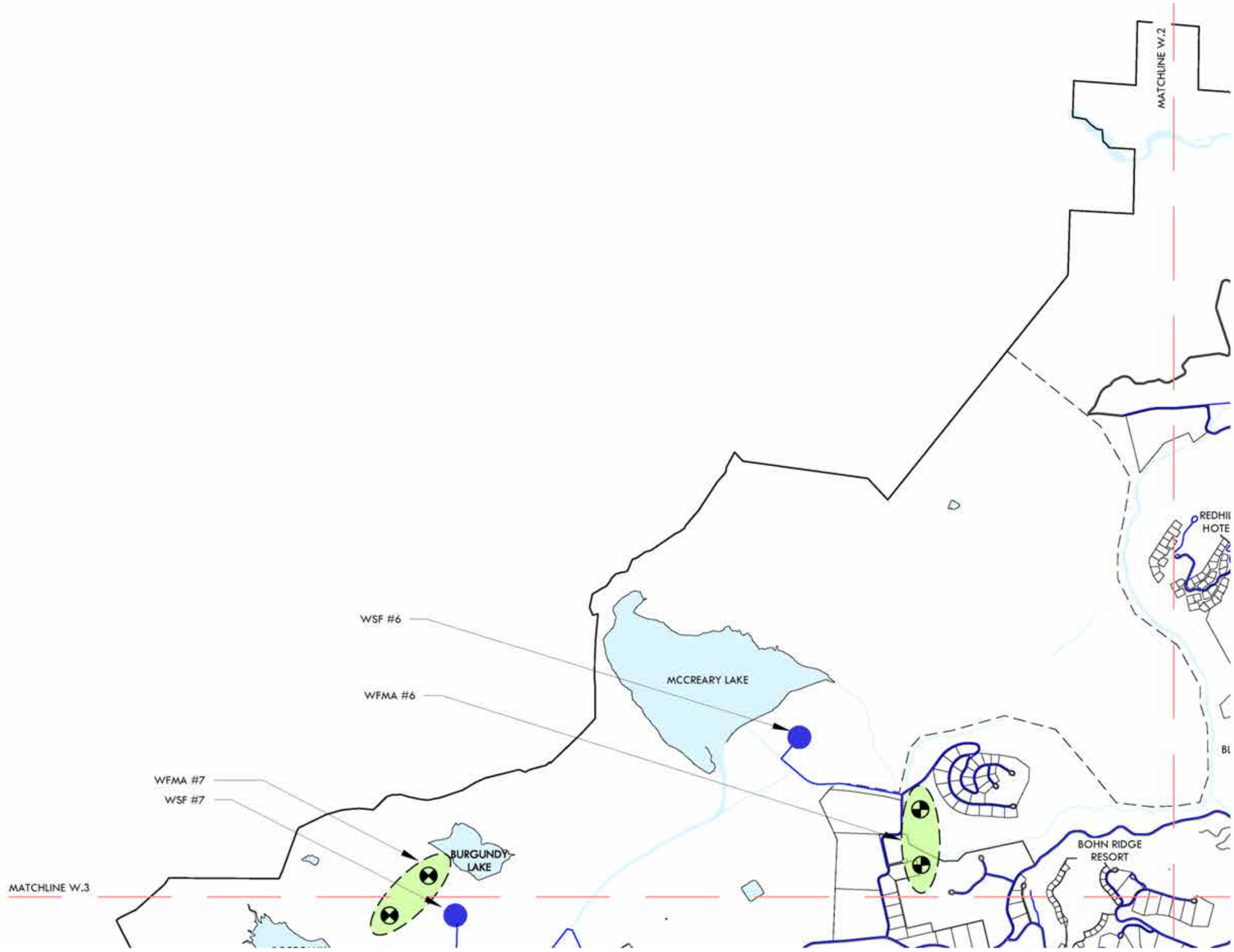
- WELL FIELD MANAGEMENT AREA (WFMA)
- ALTERNATIVE WATER STORAGE FACILITY (WSF)
- W.X SHEET INDEX

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

WATER MANAGEMENT AREA DETAIL

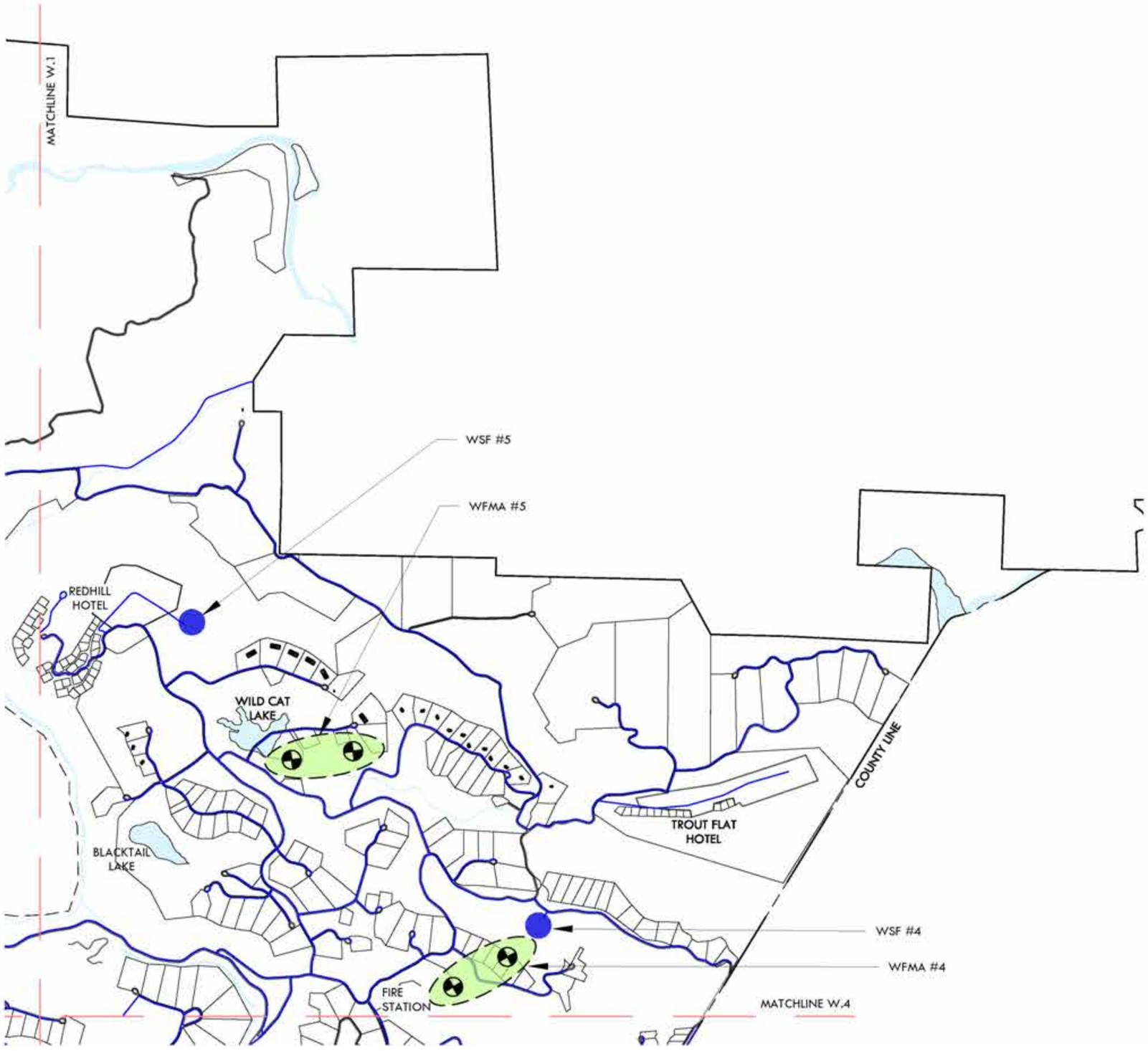
LEGEND

- WELL FIELD MANAGEMENT AREA (WFMA)
- ALTERNATIVE WATER STORAGE FACILITY (WSF)
- WATER CONVEYANCE AND DISTRIBUTION LINE



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

WATER MANAGEMENT AREA DETAIL



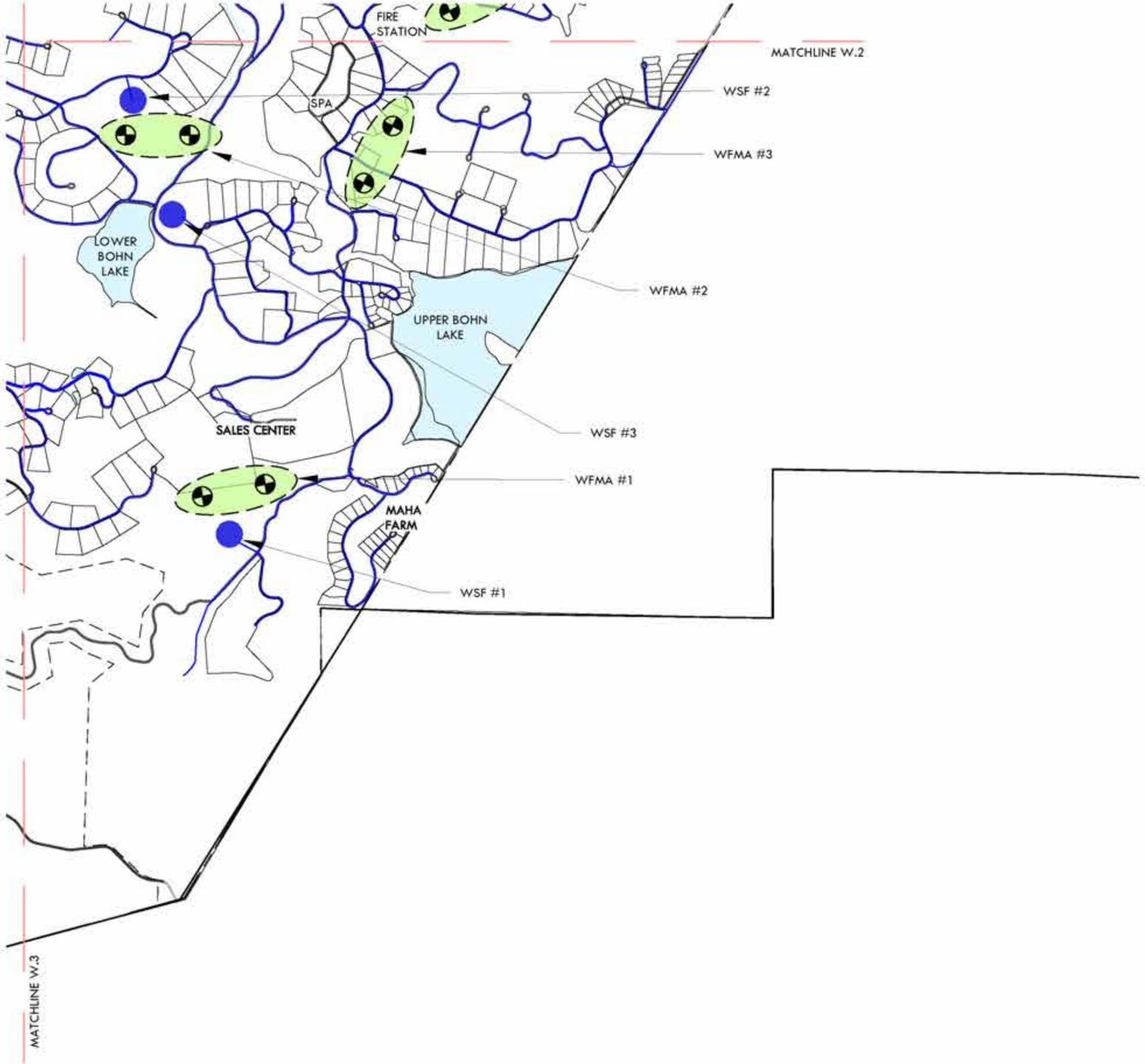
LEGEND

- WELL FIELD MANAGEMENT AREA (WFMA)
- ALTERNATIVE WATER STORAGE FACILITY (WSF)
- WATER CONVEYANCE AND DISTRIBUTION LINE

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 1000' 2000' 4000'

WATER MANAGEMENT AREA DETAIL



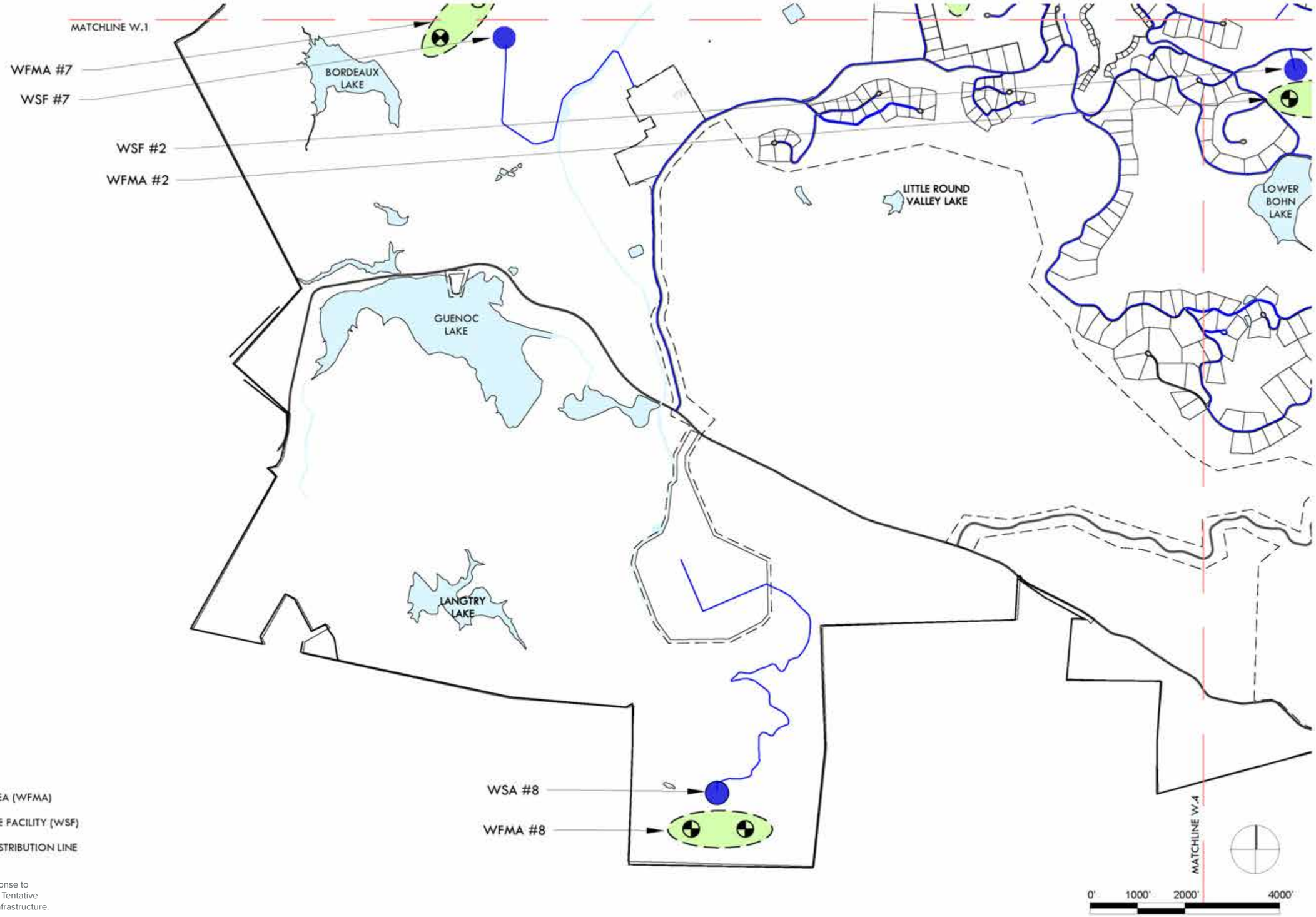
LEGEND

- WELL FIELD MANAGEMENT AREA (WFMA)
- ALTERNATIVE WATER STORAGE FACILITY (WSF)
- WATER CONVEYANCE AND DISTRIBUTION LINE

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 1000' 2000' 4000'

WATER MANAGEMENT AREA DETAIL

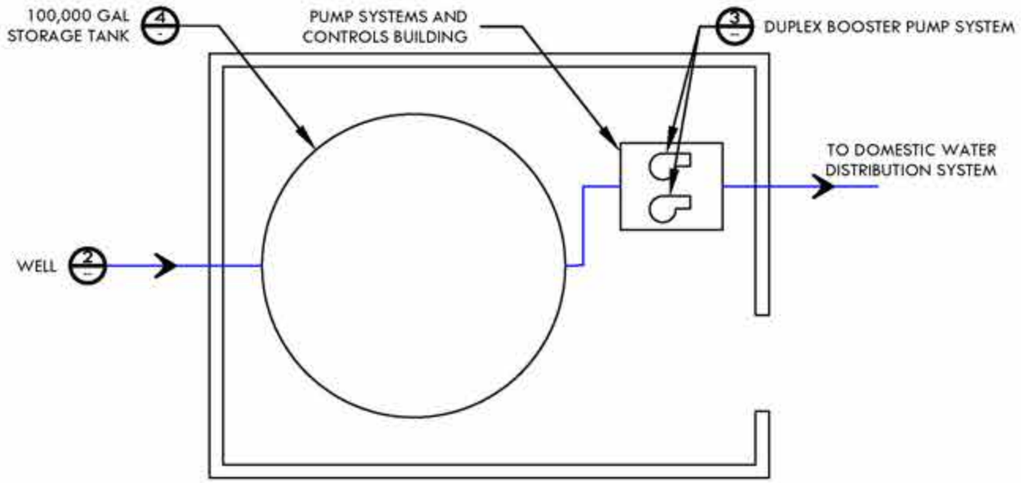


LEGEND

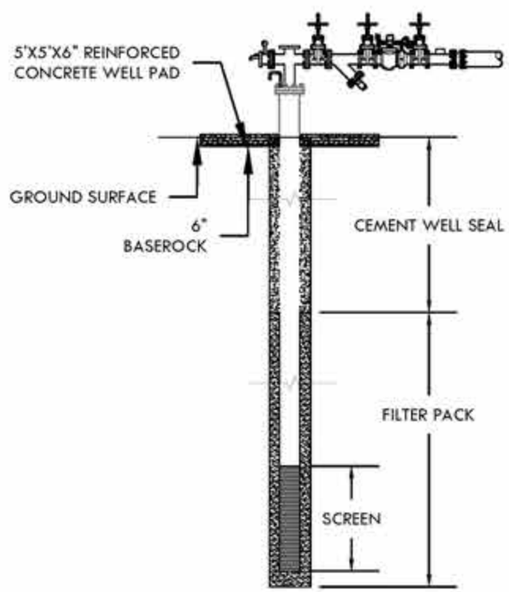
- WELL FIELD MANAGEMENT AREA (WFMA)
- ALTERNATIVE WATER STORAGE FACILITY (WSF)
- WATER CONVEYANCE AND DISTRIBUTION LINE

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

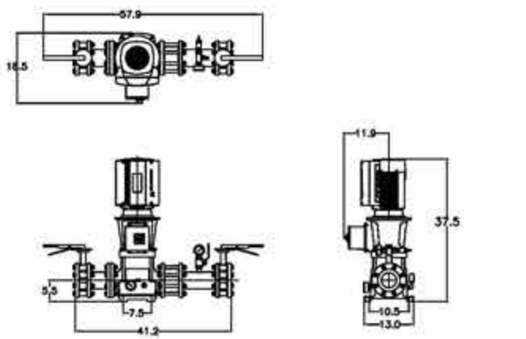
WATER TYPICAL STORAGE FACILITIES



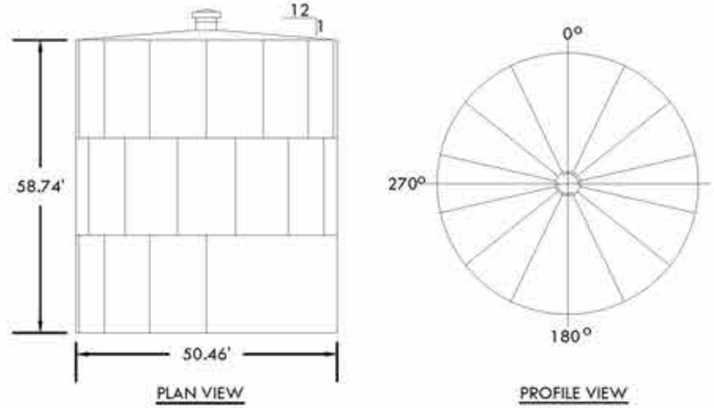
1 TYPICAL WATER STORAGE FACILITY PLAN VIEW
SCALE: 1" = 50'



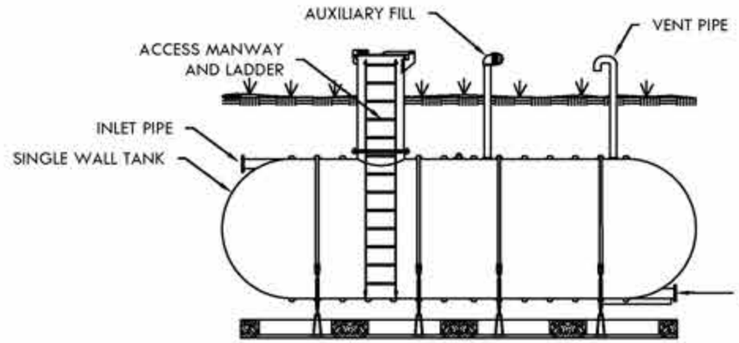
2 TYPICAL WELL
SCALE: AS DIMENSIONED



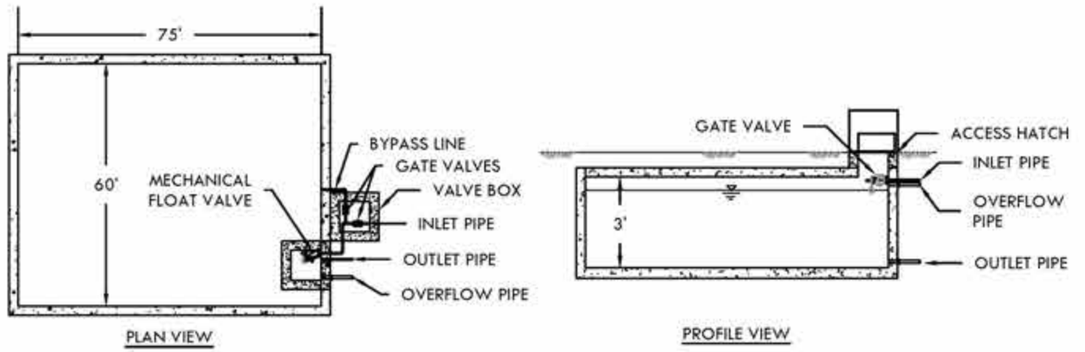
3 DUPLEX BOOSTER PUMP SYSTEM
SCALE: AS DIMENSIONED



TYPE 1 - BOLTED STEEL PANEL TANK



TYPE 2 - FIBERGLASS UNDERGROUND STORAGE TANK

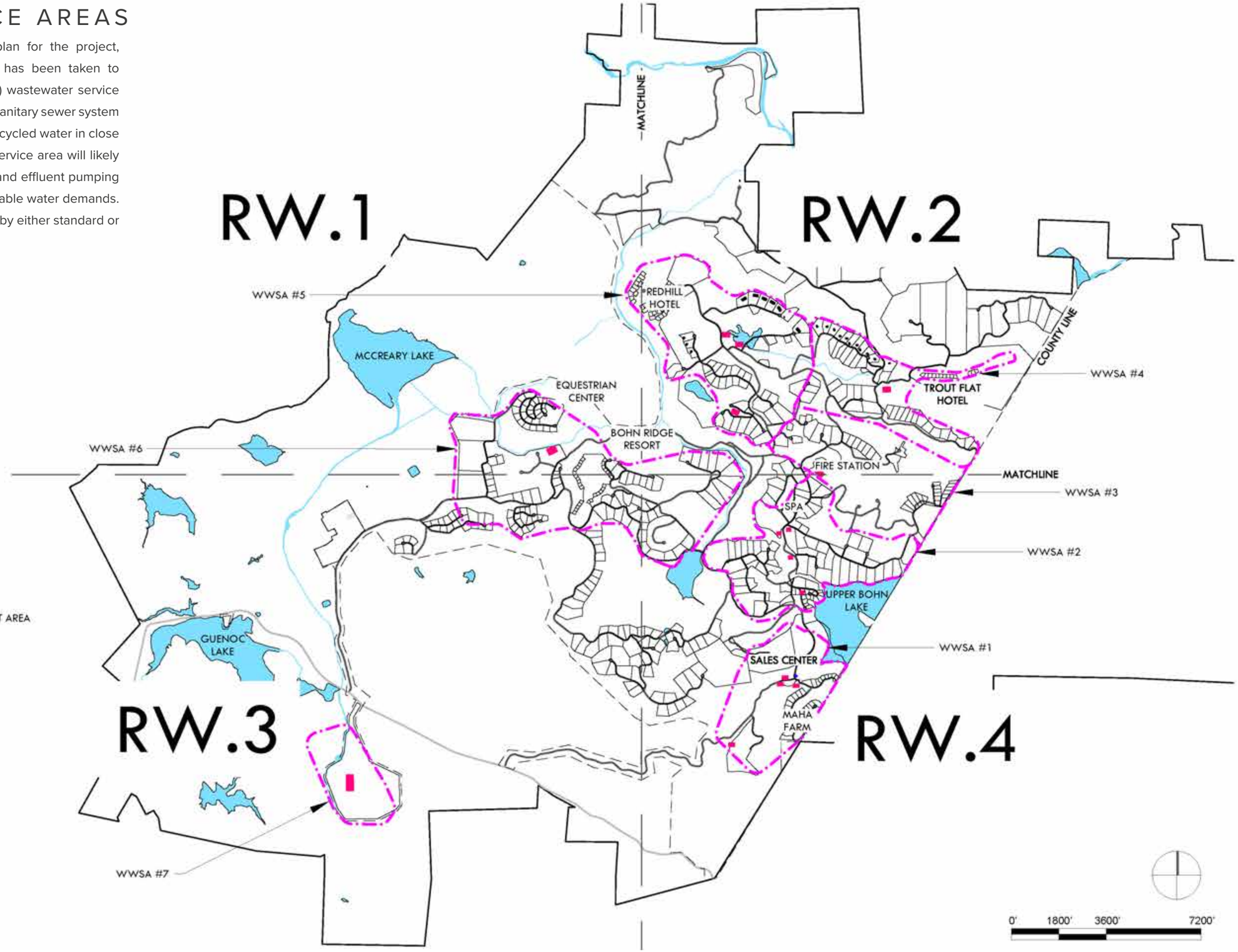


TYPE 3 - UNDERGROUND CONCRETE CISTERN

4 100,000 GALLON STORAGE TANK
SCALE: AS DIMENSIONED

WASTEWATER SERVICE AREAS

Based on the large and distributed development plan for the project, a decentralized wastewater management approach has been taken to manage wastewater from each cluster area. Eight (8) wastewater service areas are proposed and each area will have a discrete sanitary sewer system and wastewater reclamation plant to treat and reuse recycled water in close proximity to the commercial areas on the site. Each service area will likely have a 100,000 gallon recycled water storage facility and effluent pumping system. The recycled water will be reused for non-potable water demands. In addition individual lots have the option to be served by either standard or enhanced on-site wastewater septic systems.



LEGEND

- WASTE WATER SERVICE AREA (WWSA)
- ALTERNATIVE WASTE WATER MANAGEMENT AREA (WWMA)
- RW.X SHEET INDEX

NOTES

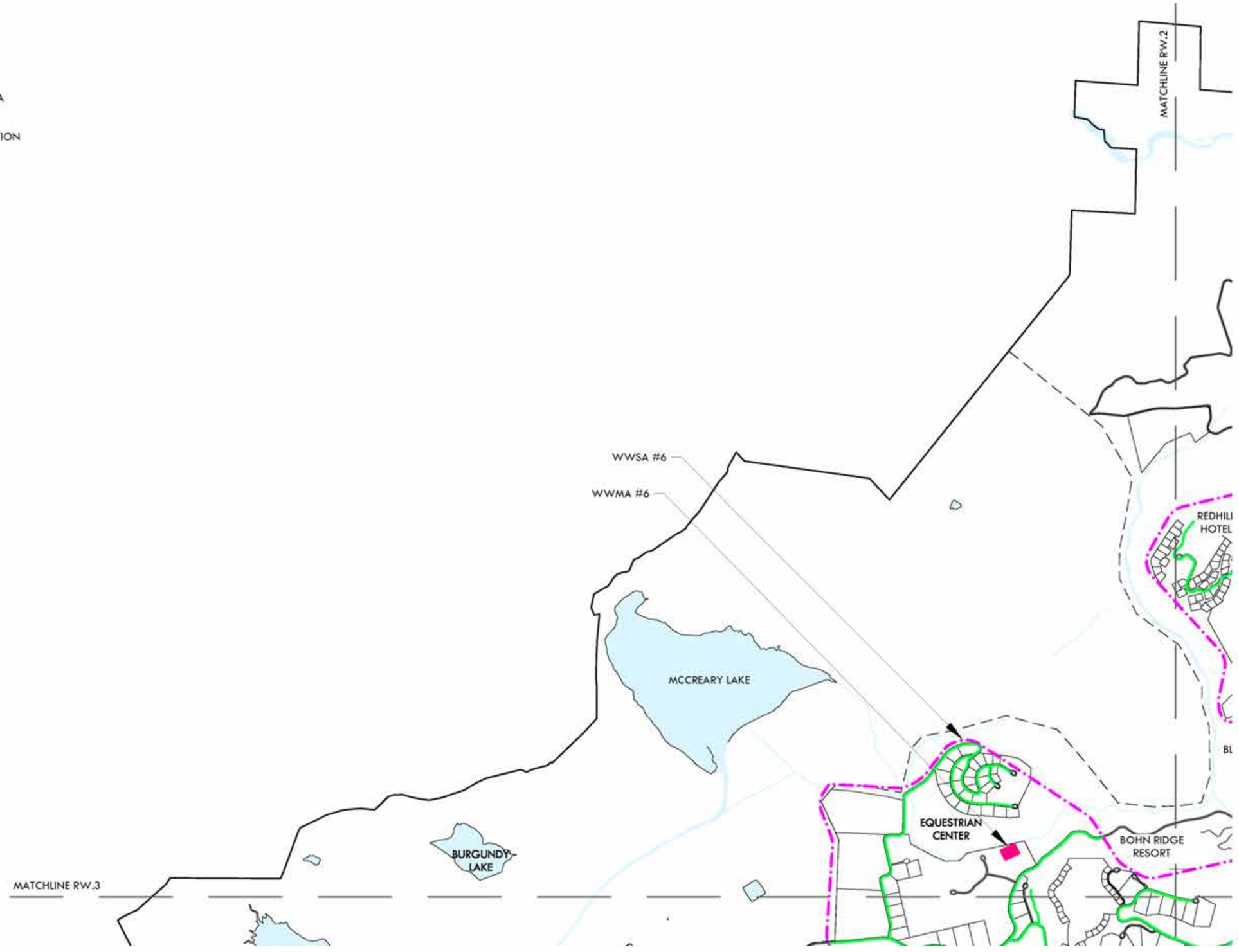
VILLA LOTS OUTSIDE OF WWSA'S WILL BE SERVED BY ONSITE WATER RECLAMATION FACILITIES. FACILITY DESIGN WILL DEPEND ON EXISTING SOIL CONDITIONS, SEE ONSITE WATER RECLAMATION FACILITIES, PAGE XX.

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

WASTEWATER SERVICE AREA DETAIL

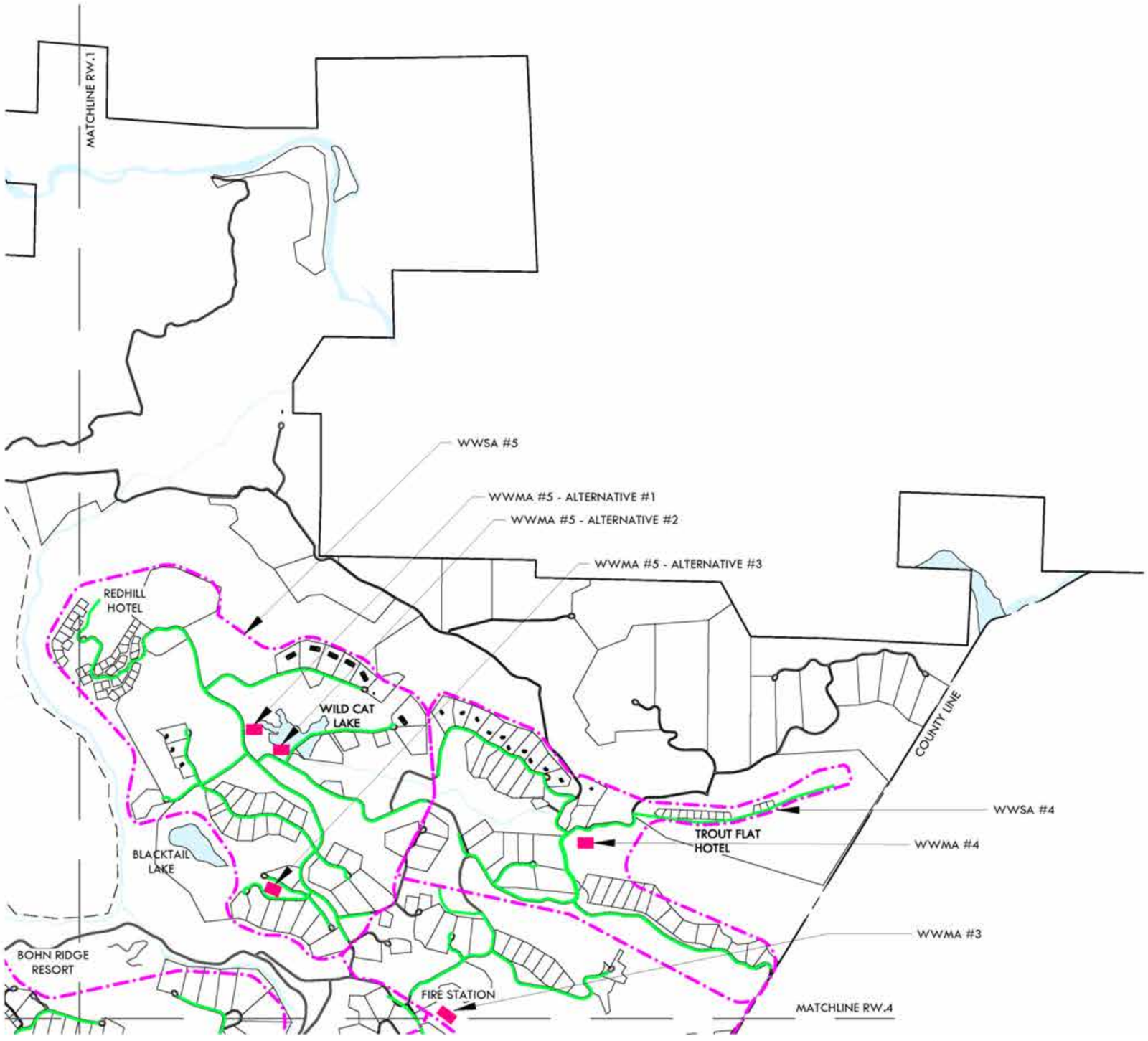
LEGEND

- WASTE WATER SERVICE AREA (WWSA)
- ALTERNATIVE WASTE WATER MANAGEMENT AREA (WWMA)
- RECLAIMED WATER CONVEYANCE AND DISTRIBUTION SYSTEM



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

WASTEWATER SERVICE AREA DETAIL

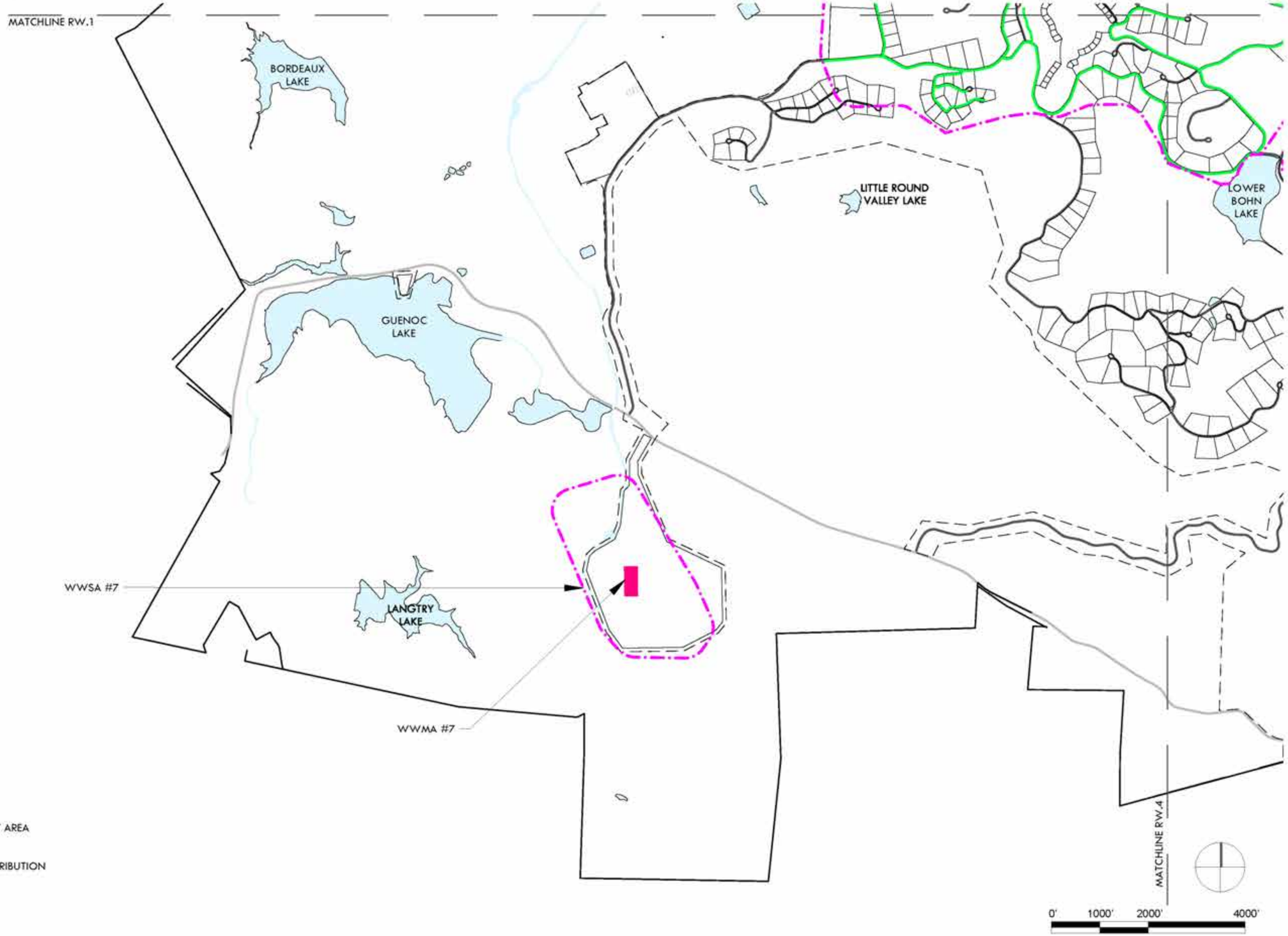


LEGEND

- WASTE WATER SERVICE AREA (WWSA)
- ALTERNATIVE WASTE WATER MANAGEMENT AREA (WWMA)
- RECLAIMED WATER CONVEYANCE AND DISTRIBUTION SYSTEM

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 1000' 2000' 4000'

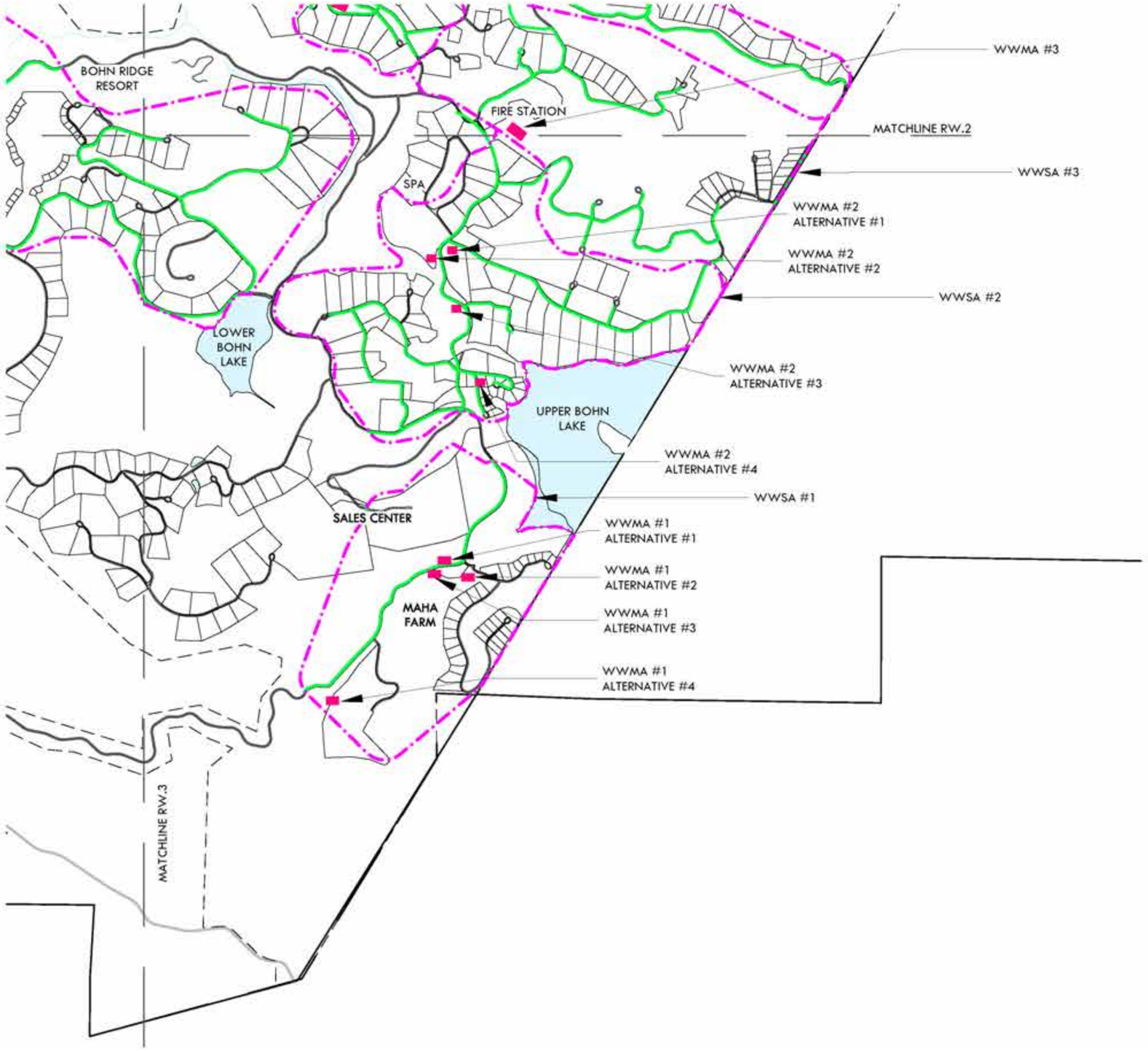


LEGEND

- WASTE WATER SERVICE AREA (WWSA)
- ALTERNATIVE WASTE WATER MANAGEMENT AREA (WWMA)
- RECLAIMED WATER CONVEYANCE AND DISTRIBUTION SYSTEM

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

WASTEWATER SERVICE AREA DETAIL

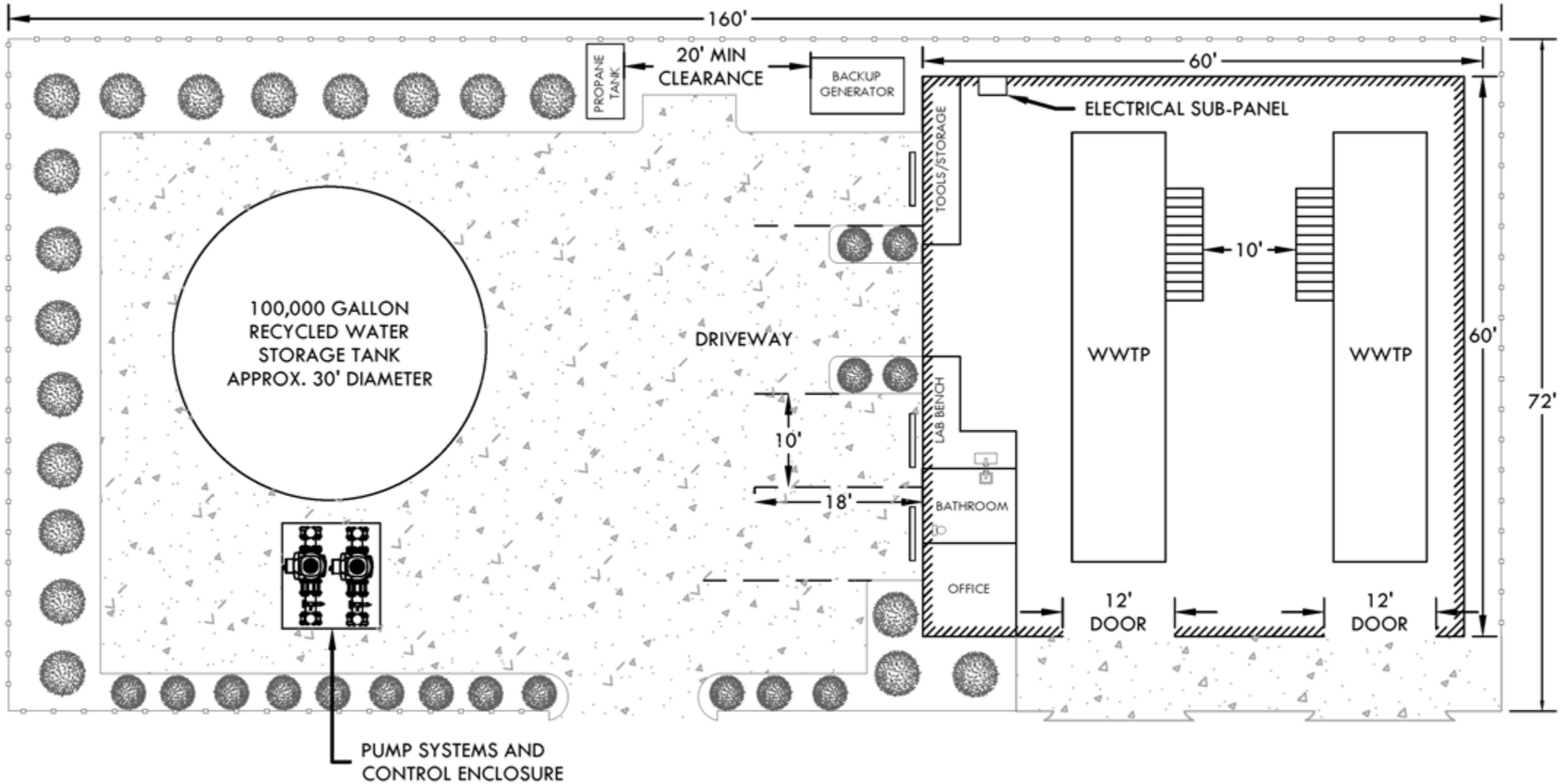


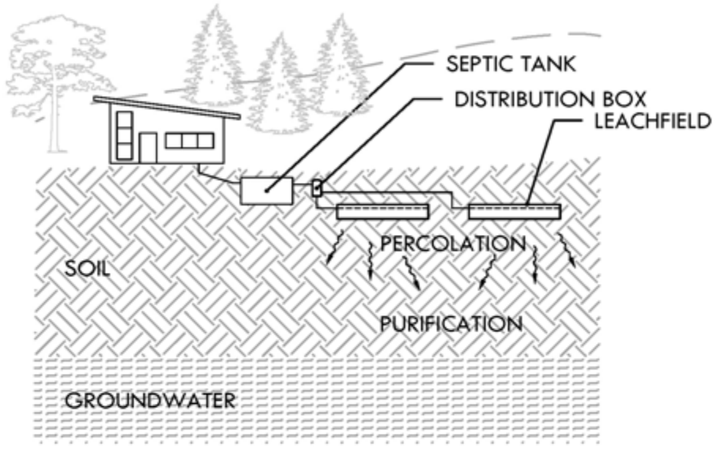
LEGEND

- WASTE WATER SERVICE AREA (WWSA)
- ALTERNATIVE WASTE WATER MANAGEMENT AREA (WWMA)
- RECLAIMED WATER CONVEYANCE AND DISTRIBUTION SYSTEM

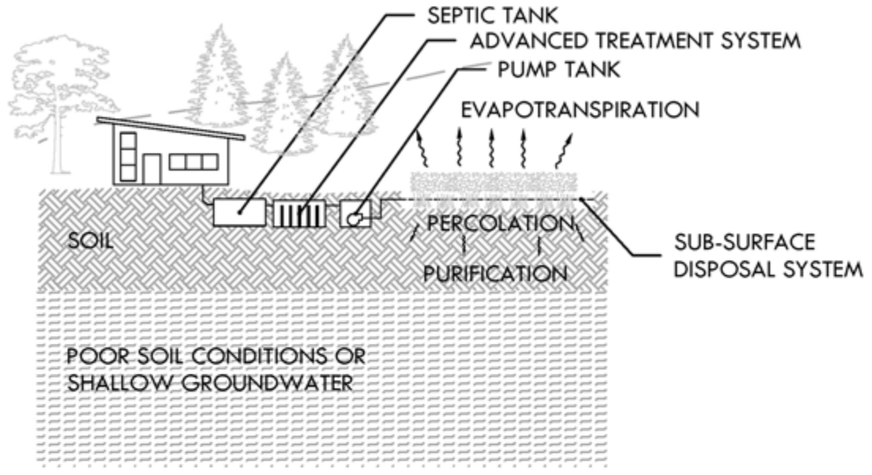
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 1000' 2000' 4000'

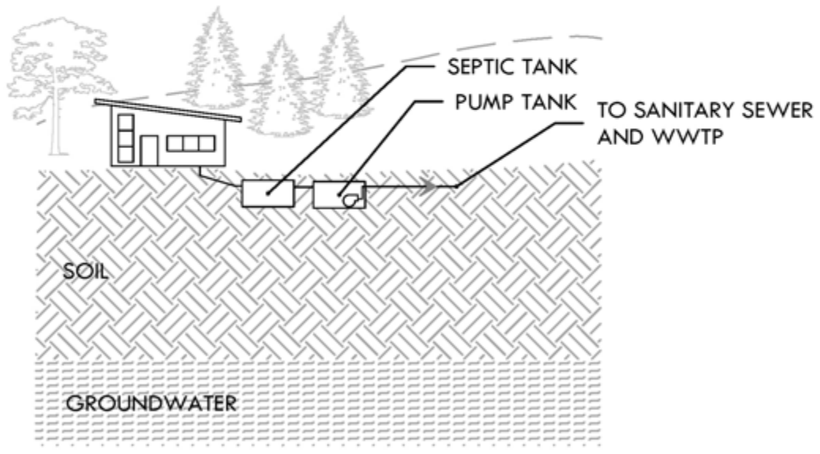

160'
PROPANE TANK
20' MIN CLEARANCE
BACKUP GENERATOR
60'
ELECTRICAL SUB-PANEL
TOOLS/STORAGE
100,000 GALLON RECYCLED WATER STORAGE TANK APPROX. 30' DIAMETER
DRIVEWAY
10'
WWTP
10'
WWTP
60'
72'
LAB BENCH
10'
18'
BATHROOM
OFFICE
12' DOOR
12' DOOR
PUMP SYSTEMS AND CONTROL ENCLOSURE



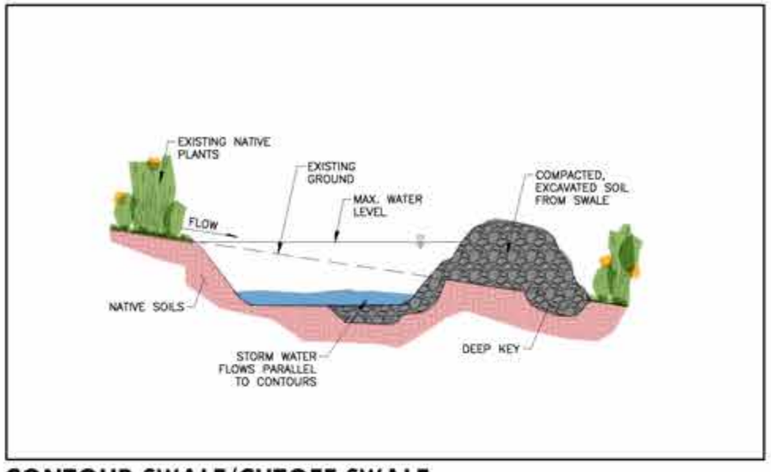
RESIDENTIAL SYSTEM TYPE 1A
STANDARD SEPTIC SYSTEM



RESIDENTIAL SYSTEM TYPE 1B
ONSITE ENHANCED
TREATMENT SYSTEM

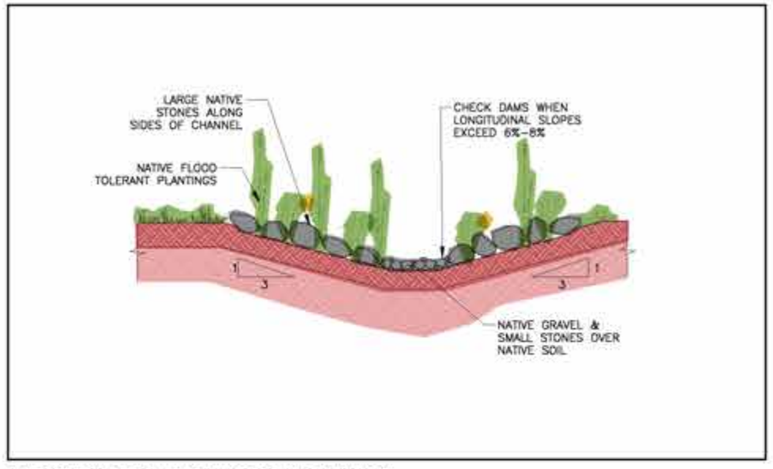


RESIDENTIAL SYSTEM TYPE 1C
SETPIC TANK EFFLUENT
SEWER SYSTEM



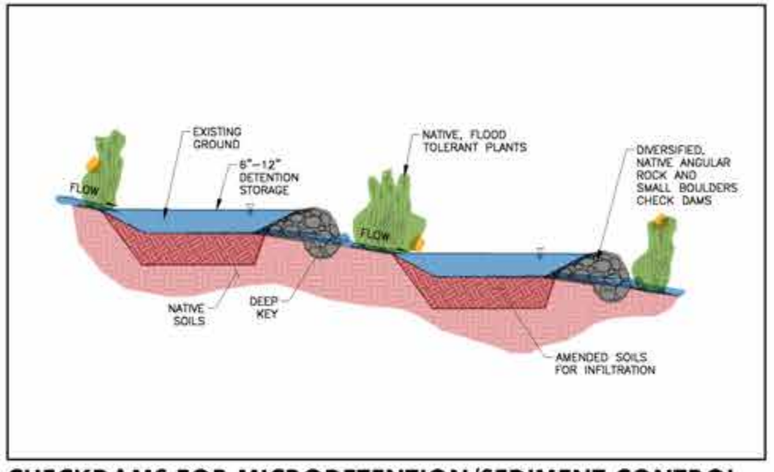
CONTOUR SWALE/CUTOFF SWALE

Contour swales and cutoff swales are integrated into the landscape to collect and transport hillside runoff prior to a roadside swale. The contour swales will also be used to disperse roof runoff and convey water towards raingardens, ponds and natural drainages. These on-contour features provide additional surface water storage and slow runoff to mimic the natural hydrologic response of the site.



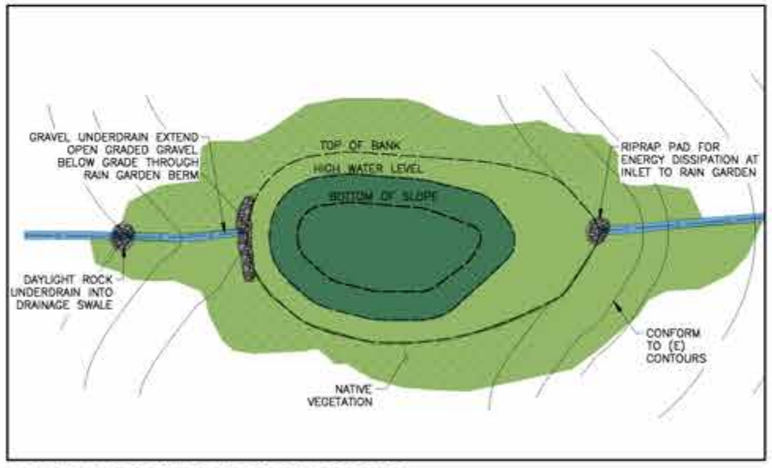
VEGETATED ROADSIDE SWALE

The project will use roadside swales in lieu of conventional piped conveyance systems. These swales will maintain existing surface drainage patters to the maximum extent feasible and will be used in conjunction with check dams and raingardens to provide passive stormwater conveyance and treatment with minimal site disturbance and reduced erosion.



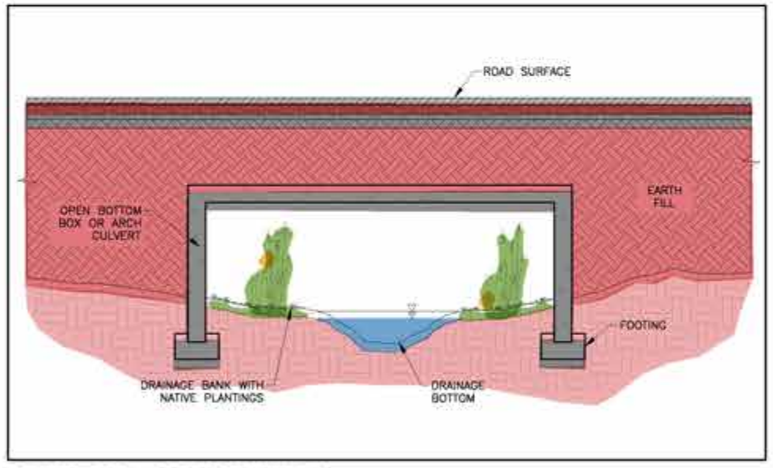
CHECKDAMS FOR MICRODETENTION/SEDIMENT CONTROL

Checkdams will be used in conjunction with vegetated roadside swales to provide erosion protection and stormwater treatment. They can be used in high slope (>4%) areas to control erosion and can be used in shallower slope regions to provide storage, treatment and infiltration. Through a series of micro detention pockets, stormwater will be slowed down and captured prior to migrating through the stone checkdams.



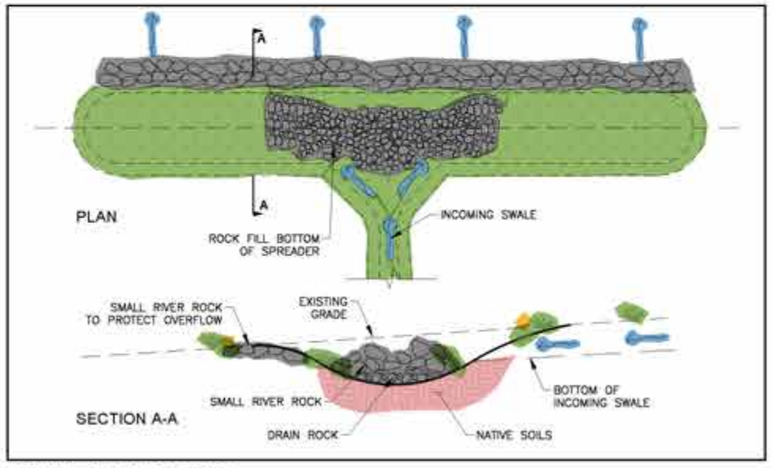
RAINGARDEN FOR TREATMENT

Raingardens will be used to provide treatment of stormwater running off roadways and hardscape areas prior to entering drainages. Generally, raingardens will be used in-line with vegetated roadside swales prior to entering a drainage. Raingardens will also be used within commercial areas to provide treatment for parking, hardscape, and roof areas. These treatment areas will be incorporated into the landscape and located to overflow into natural drainages.



OPEN BOTTOM CULVERTS

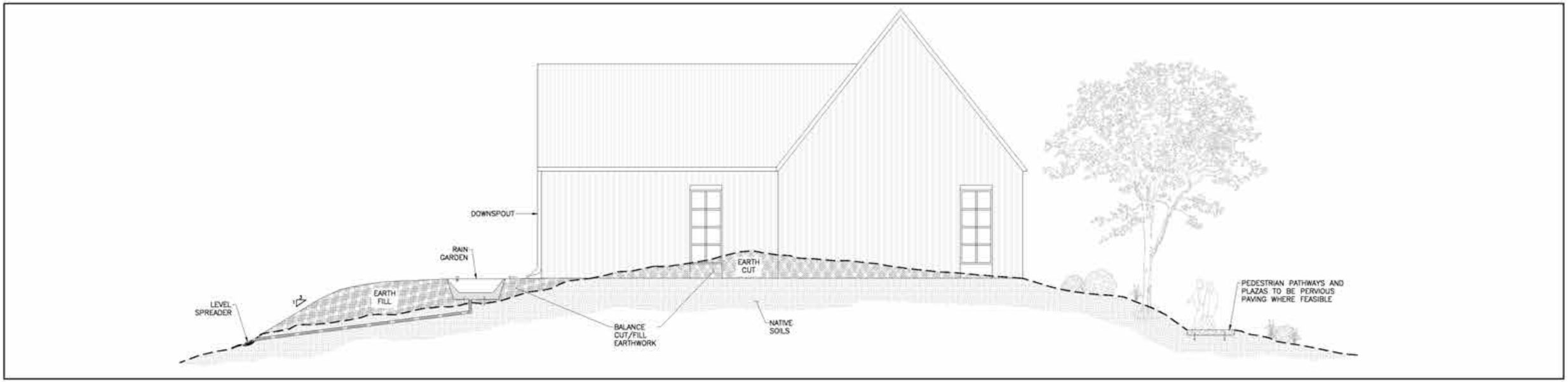
Throughout the site, there are existing drainages which have roadways crossing them. In order to provide a natural drainage channel, the project is using open bottom culverts to allow for a combination of stormwater conveyance and limited disturbance. These culverts will be both arch culverts, box culverts, and bridges.



LEVEL SPREADERS

Level spreaders will be used at the ends of drainages to allow for dispersion of stormwater from a channel into an undisturbed area of the site. This will help to prevent erosion channels from forming and provide for stormwater to drain and infiltrate through trees and undergrowth throughout the site, providing stormwater collection and treatment.

STORMWATER METHODS FOR ON-SITE DETENTION

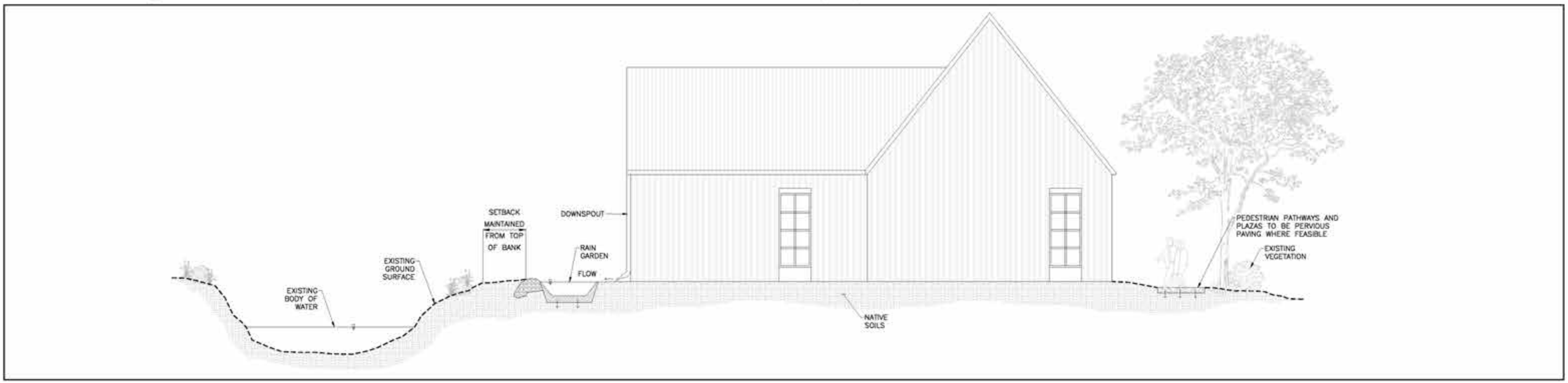


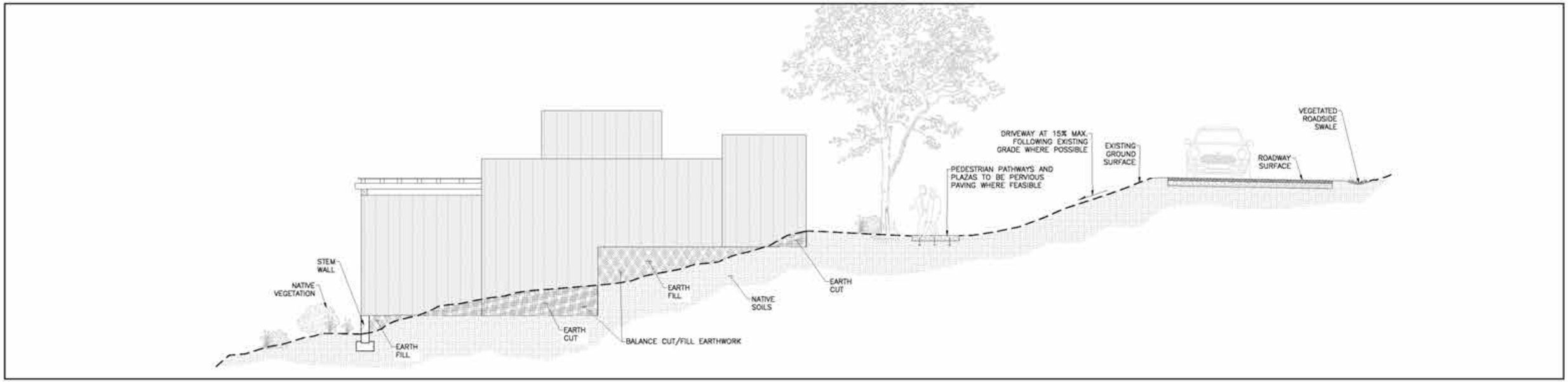
HILLTOP DEVELOPMENTS [ABOVE]

Many of the commercial areas are located at the high points of the site. Grading for these areas will attempt to balance the cut and fill within the disturbed area, while minimizing the overall extents of grading as much as is practical. Hardscape areas beyond the building will attempt to use pervious paving to reduce the amount of increased runoff coming off the hill zones.

WATER SIDE DEVEOPMENTS [BELOW]

Development adjacent to water bodies will include measures to minimize impacts to the existing hydrology, habitat, and receiving waters. These will include constructed storm water conveyances that mimic the natural drainage patterns, maintenance of setbacks from riparian zones, and material selections that preserve and improve runoff quality.



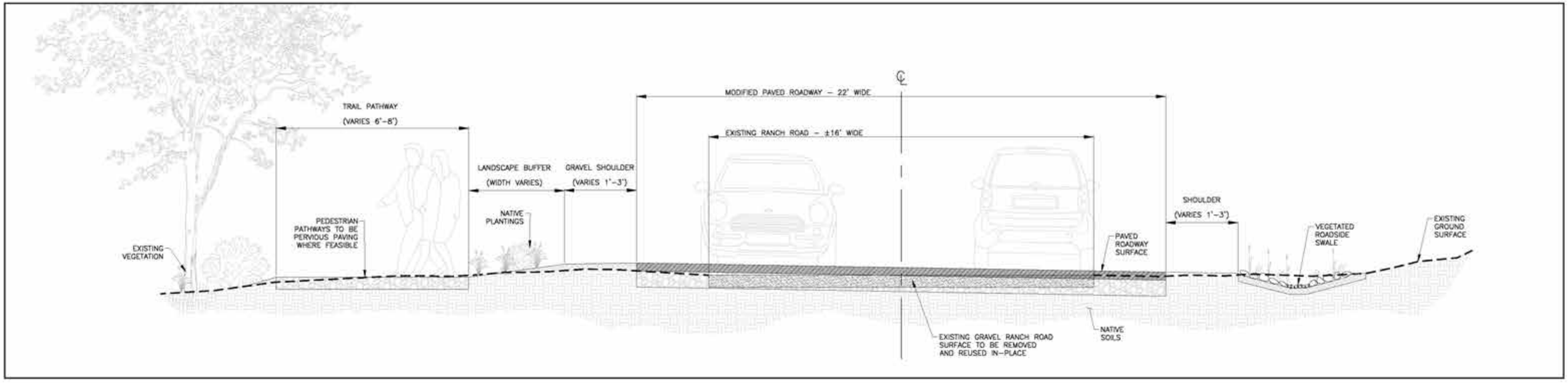


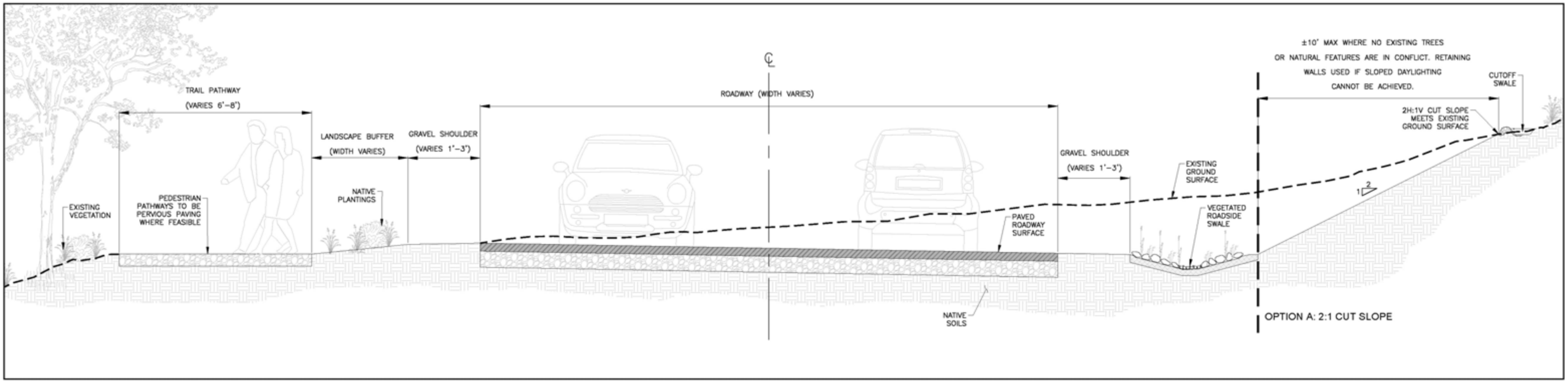
VILLA LOTS [ABOVE]

Villa lots employ a range of strategies to minimize impact to the existing site. Buildings will be located to achieve balanced earthwork cut and fill and maintain existing drainage patterns. Runoff collected from new impervious surfaces will be routed through landscape based conveyances that mitigate for water quality and peak runoff rate. Fuel maintenance and fire access will be prioritized on each developed site.

ROADWAYS OVER EXISTING RANCH ROADS [BELOW]

The majority of proposed roads will follow the alignments of existing ranch roads that are well established and maintained in good repair. Road corridors will be widened and improved to meet access requirements for emergency vehicles, guests, and operations. Runoff collected from new roads will be managed locally through a range of landscape based strategies. Earthwork cut and fill will be balanced locally as is feasible.



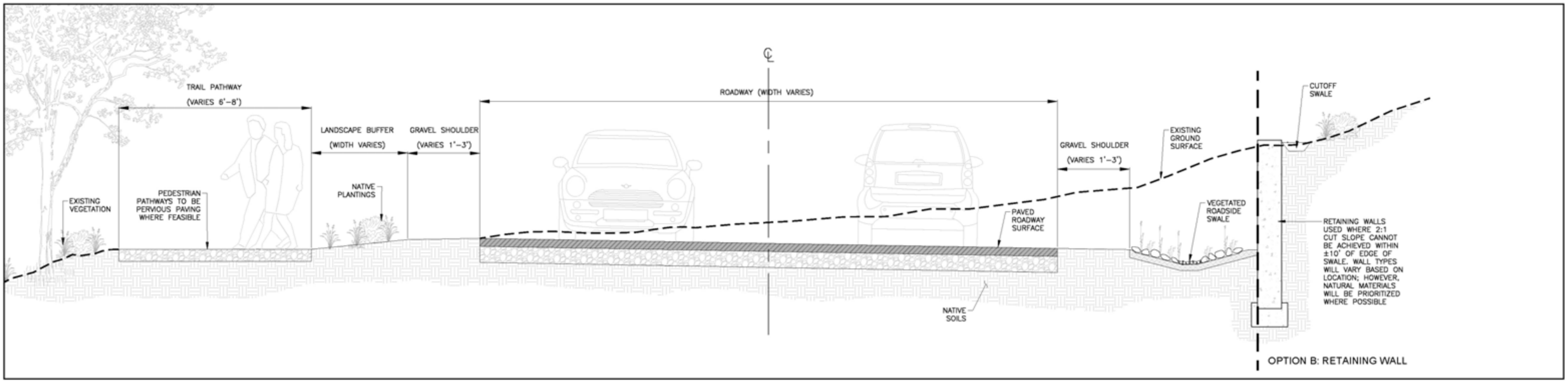


ROADWAYS THROUGH UNDEVELOPED LAND WITHOUT RETAINING WALL [ABOVE]

Roadways through undeveloped land will be carefully aligned to meet geometric and slope requirements while minimizing the impact to the existing topography, habitat, and hydrology. Where cross slopes are gentle, cut and fill slopes will be used to conform to existing grades. Cutoff swales will route run-on around new roads to preserve runoff quality and runoff collected from new impervious surfaces will be routed through site based elements that mitigate for water quality and peak runoff rates.

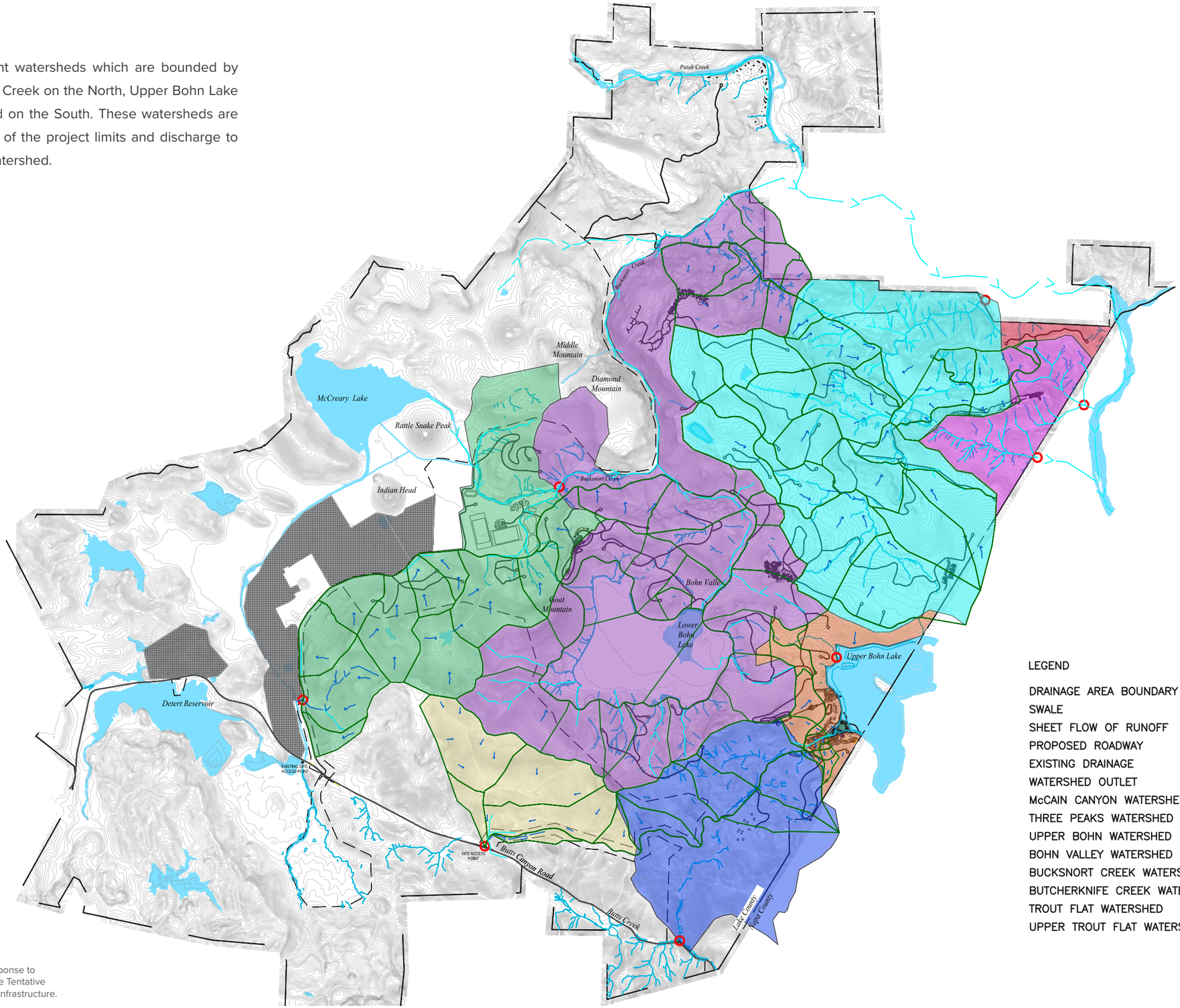
ROADWAYS THROUGH UNDEVELOPED LAND WITH RETAINING WALL [BELOW]

In areas where necessitated by cross slopes, new roadways will include retaining walls to limit the extents of disturbance. Cutoff swales will route run-on around new roads to preserve runoff quality and runoff collected from new impervious surfaces will be routed through site based elements that might mitigate for water quality and peak runoff rates.



WATERSHEDS

The Maha site is composed of eight watersheds which are bounded by Bucksnort Creek on the West, Putah Creek on the North, Upper Bohn Lake on the East, and Butts Canyon Road on the South. These watersheds are mainly contained within the bounds of the project limits and discharge to drainages and creeks within each watershed.



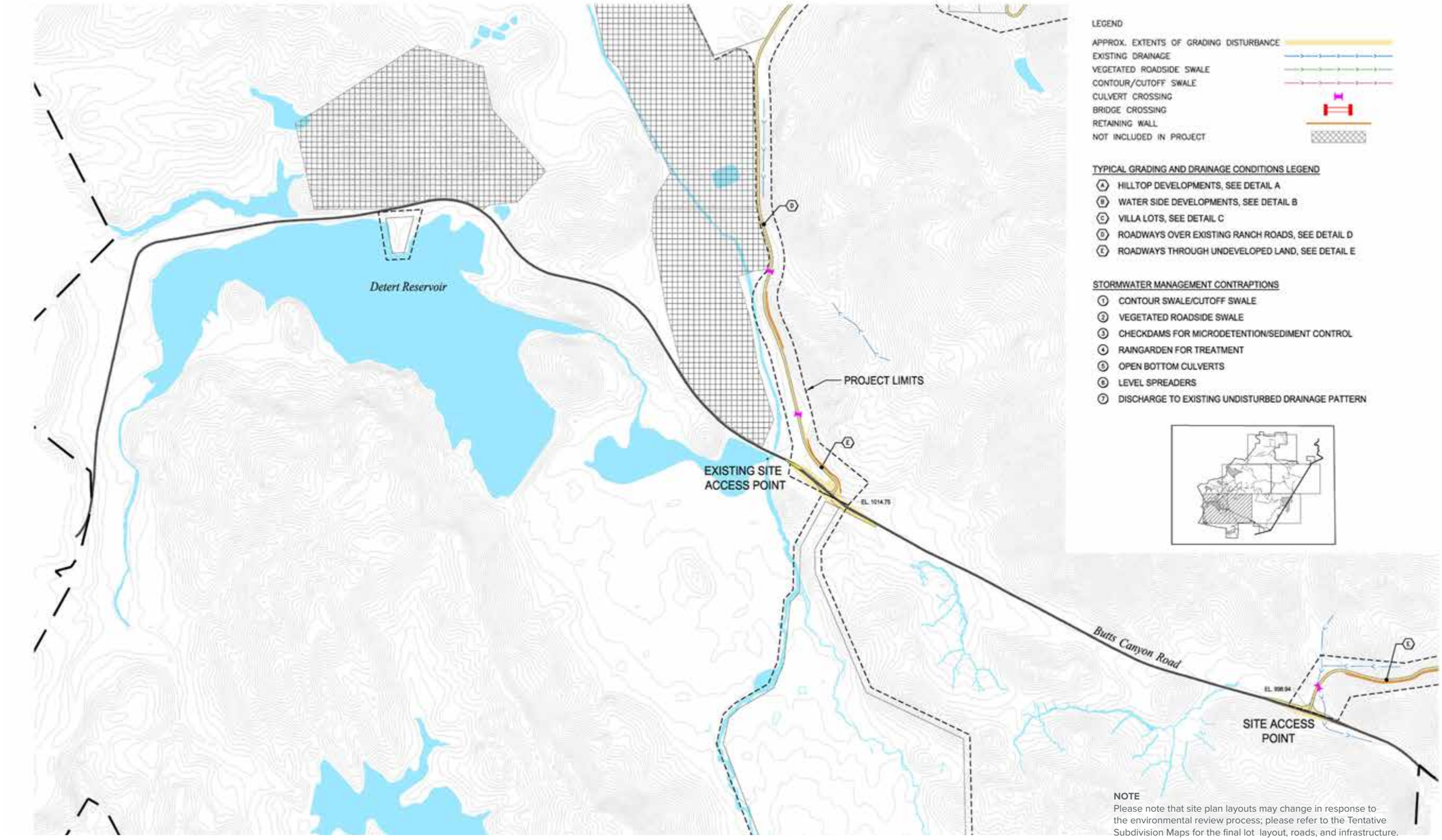
LEGEND

- DRAINAGE AREA BOUNDARY
- SWALE
- SHEET FLOW OF RUNOFF
- PROPOSED ROADWAY
- EXISTING DRAINAGE
- WATERSHED OUTLET
- McCAIN CANYON WATERSHED
- THREE PEAKS WATERSHED
- UPPER BOHN WATERSHED
- BOHN VALLEY WATERSHED
- BUCKSNORT CREEK WATERSHED
- BUTCHERKNIFE CREEK WATERSHED
- TROUT FLAT WATERSHED
- UPPER TROUT FLAT WATERSHED

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

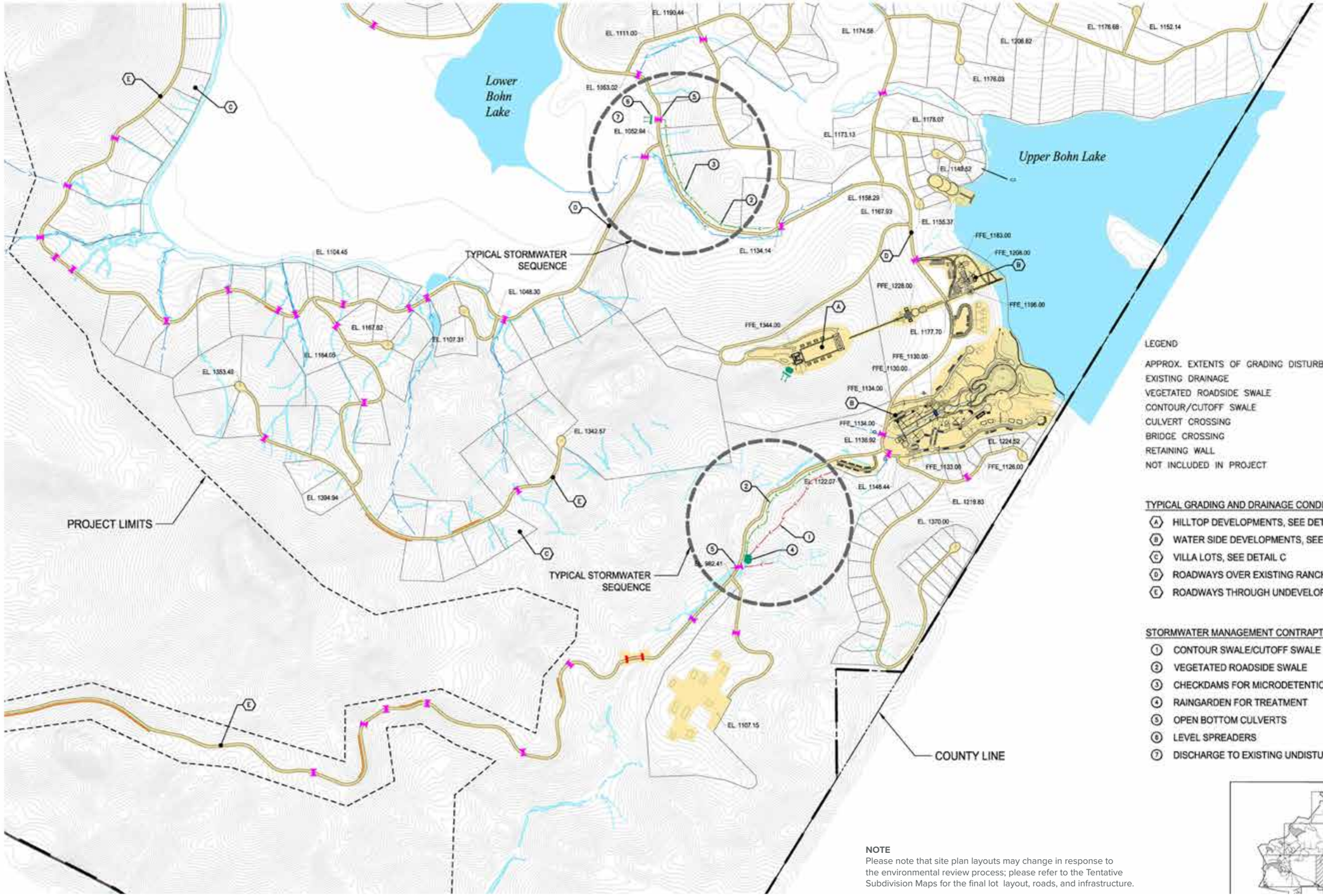
GRADING & DRAINAGE PLAN

Grading design for roads, structures, and site landscaping will be carefully laid out to work with existing contours, minimizing the disturbance to existing conditions and habitat as much as possible. Cut and fill conditions will be balanced across the site in as close proximity as possible in order to reduce truck traffic and overall disturbance. Drainage improvements will include new crossings and conveyances that accommodate the development while preserving and enhancing the site watersheds.



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

GRADING & DRAINAGE PLAN



LEGEND

- APPROX. EXTENTS OF GRADING DISTURBANCE
- EXISTING DRAINAGE
- VEGETATED ROADSIDE SWALE
- CONTOUR/CUTOFF SWALE
- CULVERT CROSSING
- BRIDGE CROSSING
- RETAINING WALL
- NOT INCLUDED IN PROJECT

TYPICAL GRADING AND DRAINAGE CONDITIONS LEGEND

- (A) HILLTOP DEVELOPMENTS, SEE DETAIL A
- (B) WATER SIDE DEVELOPMENTS, SEE DETAIL B
- (C) VILLA LOTS, SEE DETAIL C
- (D) ROADWAYS OVER EXISTING RANCH ROADS, SEE DETAIL D
- (E) ROADWAYS THROUGH UNDEVELOPED LAND, SEE DETAIL E

STORMWATER MANAGEMENT CONTRAPTIONS

- (1) CONTOUR SWALE/CUTOFF SWALE
- (2) VEGETATED ROADSIDE SWALE
- (3) CHECKDAMS FOR MICRODETENTION/SEDIMENT CONTROL
- (4) RAINGARDEN FOR TREATMENT
- (5) OPEN BOTTOM CULVERTS
- (6) LEVEL SPREADERS
- (7) DISCHARGE TO EXISTING UNDISTURBED DRAINAGE PATTERN

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

GRADING & DRAINAGE PLAN

LEGEND

- APPROX. EXTENTS OF GRADING DISTURBANCE
- EXISTING DRAINAGE
- VEGETATED ROADSIDE SWALE
- CONTOUR/CUTOFF SWALE
- CULVERT CROSSING
- BRIDGE CROSSING
- RETAINING WALL
- NOT INCLUDED IN PROJECT

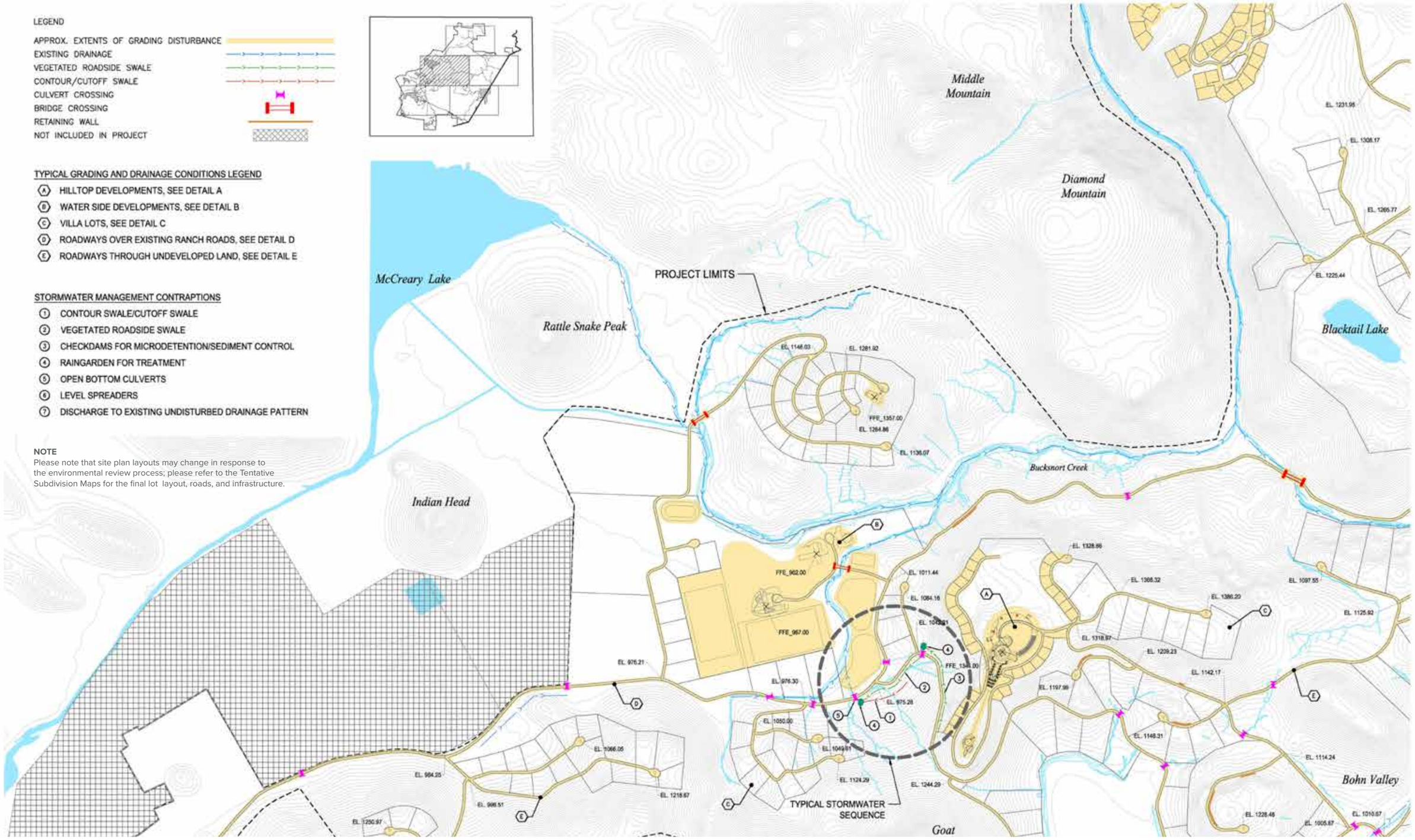
TYPICAL GRADING AND DRAINAGE CONDITIONS LEGEND

- (A) HILLTOP DEVELOPMENTS, SEE DETAIL A
- (B) WATER SIDE DEVELOPMENTS, SEE DETAIL B
- (C) VILLA LOTS, SEE DETAIL C
- (D) ROADWAYS OVER EXISTING RANCH ROADS, SEE DETAIL D
- (E) ROADWAYS THROUGH UNDEVELOPED LAND, SEE DETAIL E

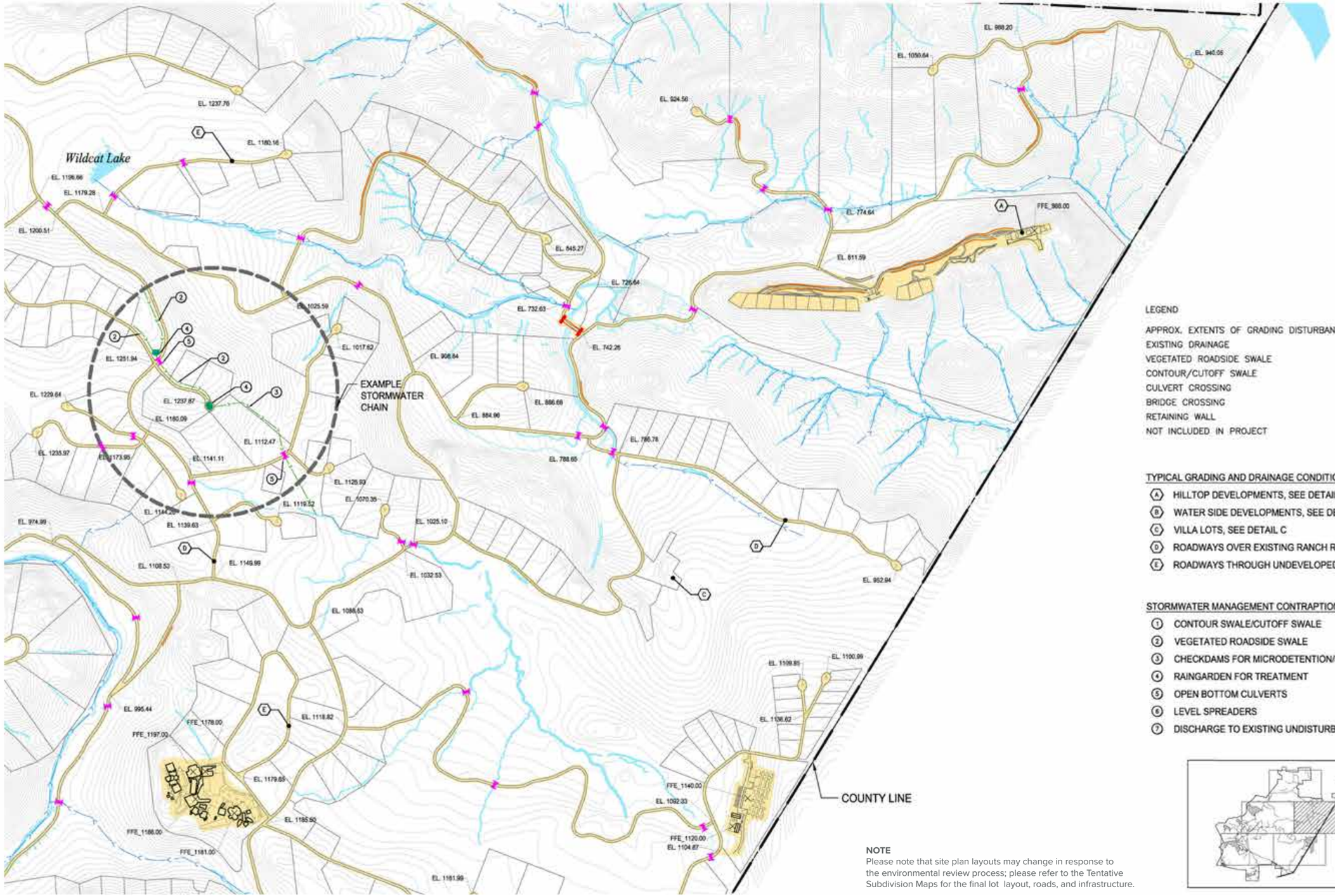
STORMWATER MANAGEMENT CONTRAPTIONS

- (1) CONTOUR SWALE/CUTOFF SWALE
- (2) VEGETATED ROADSIDE SWALE
- (3) CHECKDAMS FOR MICRODETENTION/SEDIMENT CONTROL
- (4) RAINGARDEN FOR TREATMENT
- (5) OPEN BOTTOM CULVERTS
- (6) LEVEL SPREADERS
- (7) DISCHARGE TO EXISTING UNDISTURBED DRAINAGE PATTERN

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.



GRADING & DRAINAGE PLAN



LEGEND

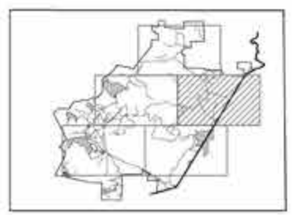
- APPROX. EXTENTS OF GRADING DISTURBANCE
- EXISTING DRAINAGE
- VEGETATED ROADSIDE SWALE
- CONTOUR/CUTOFF SWALE
- CULVERT CROSSING
- BRIDGE CROSSING
- RETAINING WALL
- NOT INCLUDED IN PROJECT

TYPICAL GRADING AND DRAINAGE CONDITIONS LEGEND

- (A) HILLTOP DEVELOPMENTS, SEE DETAIL A
- (B) WATER SIDE DEVELOPMENTS, SEE DETAIL B
- (C) VILLA LOTS, SEE DETAIL C
- (D) ROADWAYS OVER EXISTING RANCH ROADS, SEE DETAIL D
- (E) ROADWAYS THROUGH UNDEVELOPED LAND, SEE DETAIL E

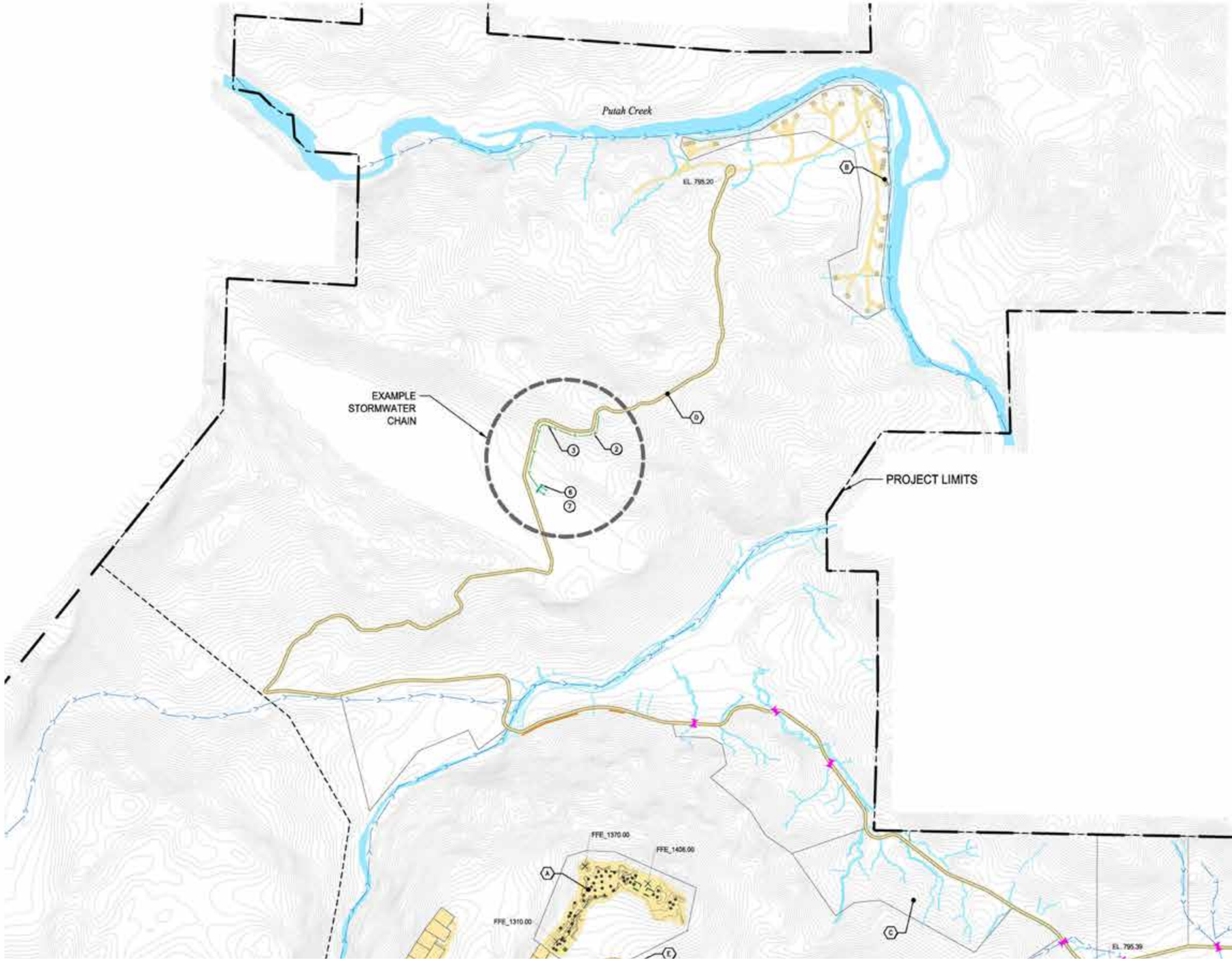
STORMWATER MANAGEMENT CONTRAPTIONS

- (1) CONTOUR SWALE/CUTOFF SWALE
- (2) VEGETATED ROADSIDE SWALE
- (3) CHECKDAMS FOR MICRODETENTION/SEDIMENT CONTROL
- (4) RAINGARDEN FOR TREATMENT
- (5) OPEN BOTTOM CULVERTS
- (6) LEVEL SPREADERS
- (7) DISCHARGE TO EXISTING UNDISTURBED DRAINAGE PATTERN



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

GRADING & DRAINAGE PLAN



LEGEND

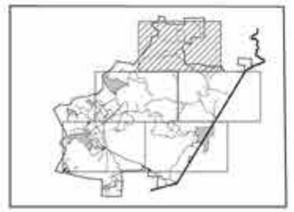
- APPROX. EXTENTS OF GRADING DISTURBANCE
- EXISTING DRAINAGE
- VEGETATED ROADSIDE SWALE
- CONTOUR/CUTOFF SWALE
- CULVERT CROSSING
- BRIDGE CROSSING
- RETAINING WALL
- NOT INCLUDED IN PROJECT

TYPICAL GRADING AND DRAINAGE CONDITIONS LEGEND

- (A) HILLTOP DEVELOPMENTS, SEE DETAIL A
- (B) WATER SIDE DEVELOPMENTS, SEE DETAIL B
- (C) VILLA LOTS, SEE DETAIL C
- (D) ROADWAYS OVER EXISTING RANCH ROADS, SEE DETAIL D
- (E) ROADWAYS THROUGH UNDEVELOPED LAND, SEE DETAIL E

STORMWATER MANAGEMENT CONTRAPTIONS

- (1) CONTOUR SWALE/CUTOFF SWALE
- (2) VEGETATED ROADSIDE SWALE
- (3) CHECKDAMS FOR MICRODETENTION/SEDIMENT CONTROL
- (4) RAINGARDEN FOR TREATMENT
- (5) OPEN BOTTOM CULVERTS
- (6) LEVEL SPREADERS
- (7) DISCHARGE TO EXISTING UNDISTURBED DRAINAGE PATTERN



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

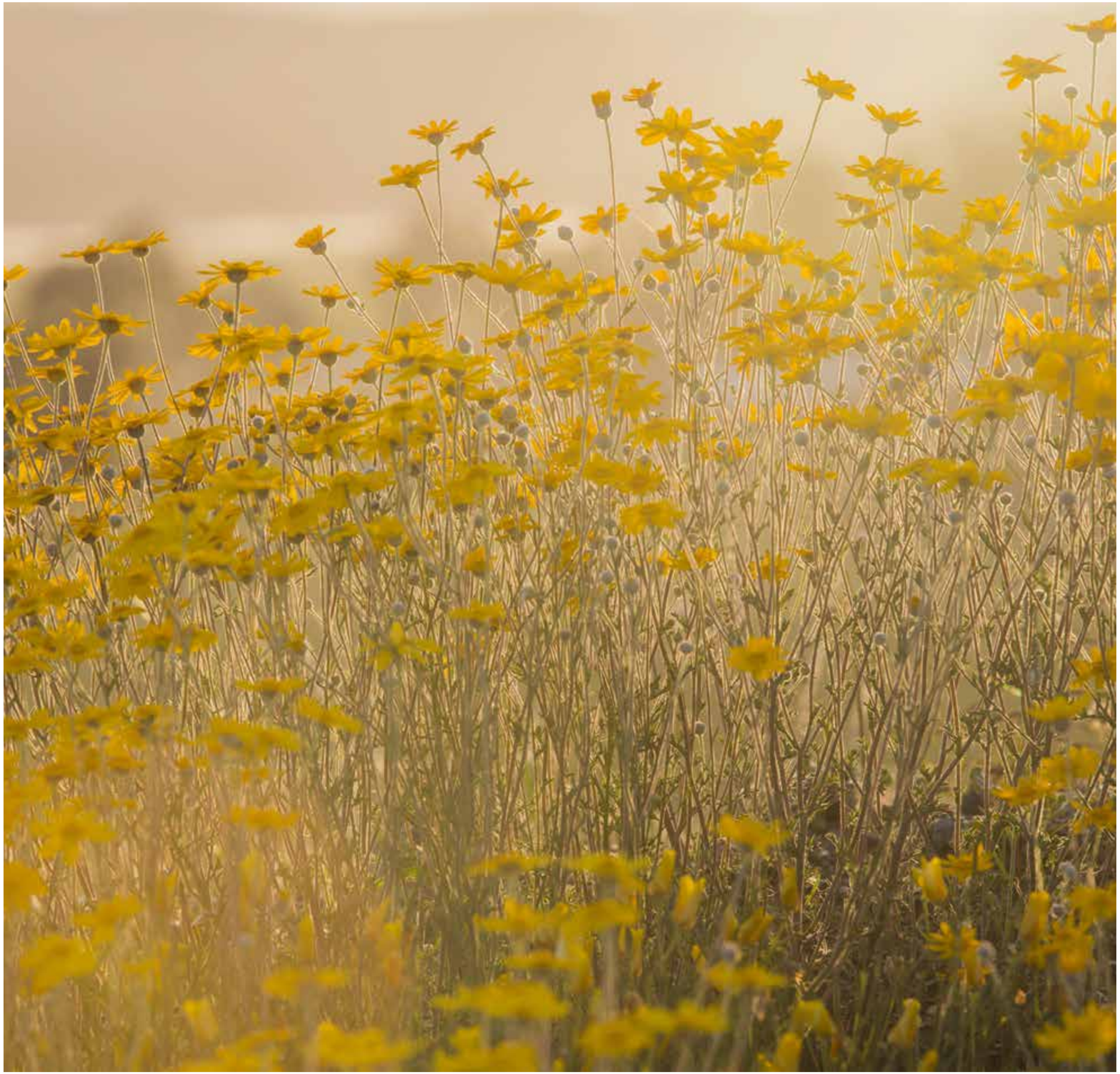
DRY UTILITIES

The availability and delivery of public services is an essential factor to consider in any new development. However, considering the scope, location, and long-term development period, it is proposed that the majority of the infrastructure will be privately owned and managed.

As narrated by the Middletown Area Plan Special Study Area No.3, innovative development and Smart Growth techniques are the ideal fit for development within Guenoc Valley. By “low impact development” and incorporating strategies that mimic and augment natural systems, the project will enhance the landscape’s resilience and adaptability throughout all phases of development.

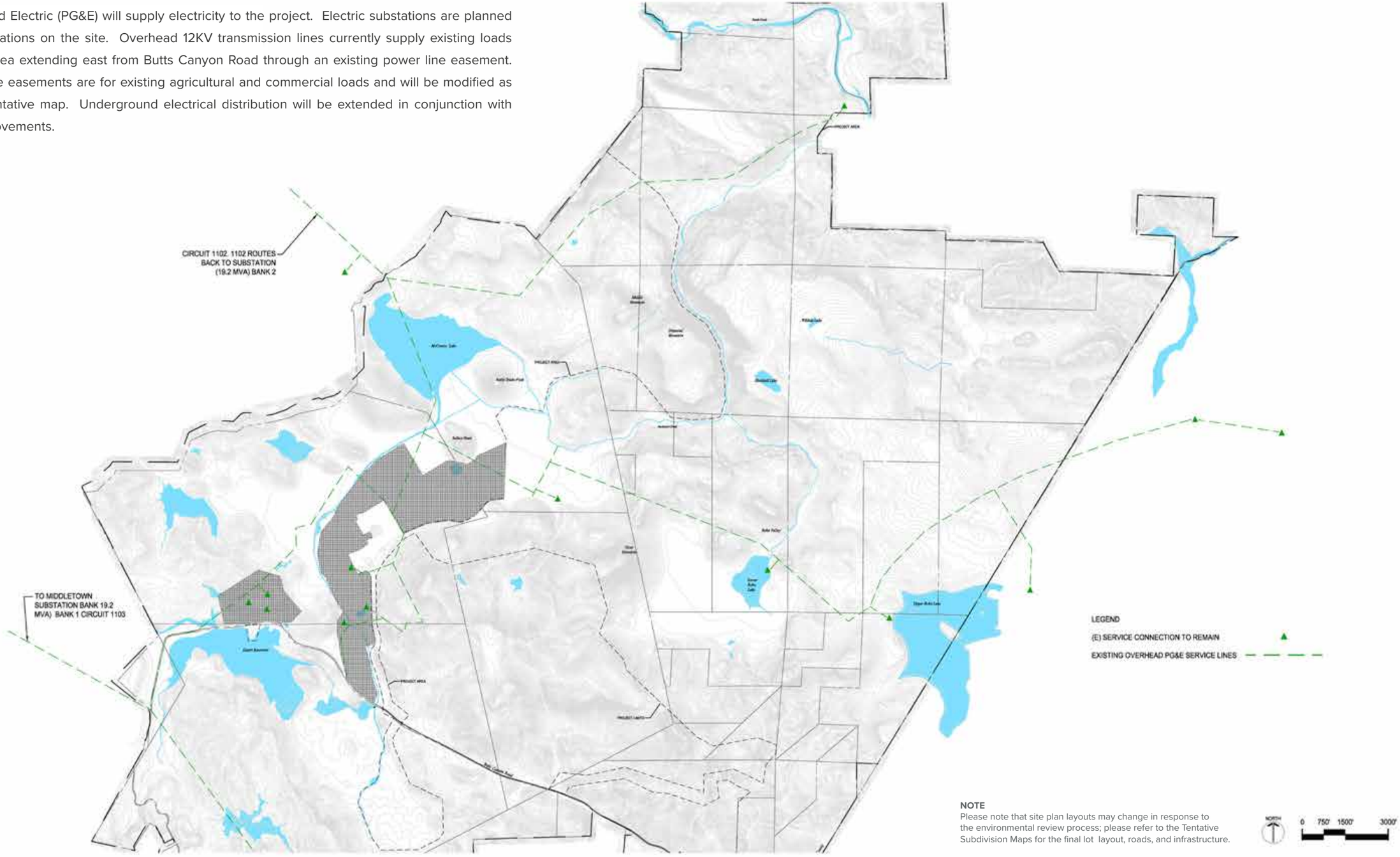
The GVD Specific Plan includes utility infrastructure required to serve the architectural clusters. Each component of the utility infrastructure system is designed to accommodate the build-out of the GVD area. Phasing of infrastructure improvements and funding obligations will be detailed in the Development Agreements. Utility infrastructure will be constructed, dedicated with public easements, as seen on the tentative subdivision map.

On and potential off-site, renewable energy generation and storage systems will be included in the development. The on-site renewables will be built in a mix of the architecture, centralized at one location on the site, and/or be clustered within developments.



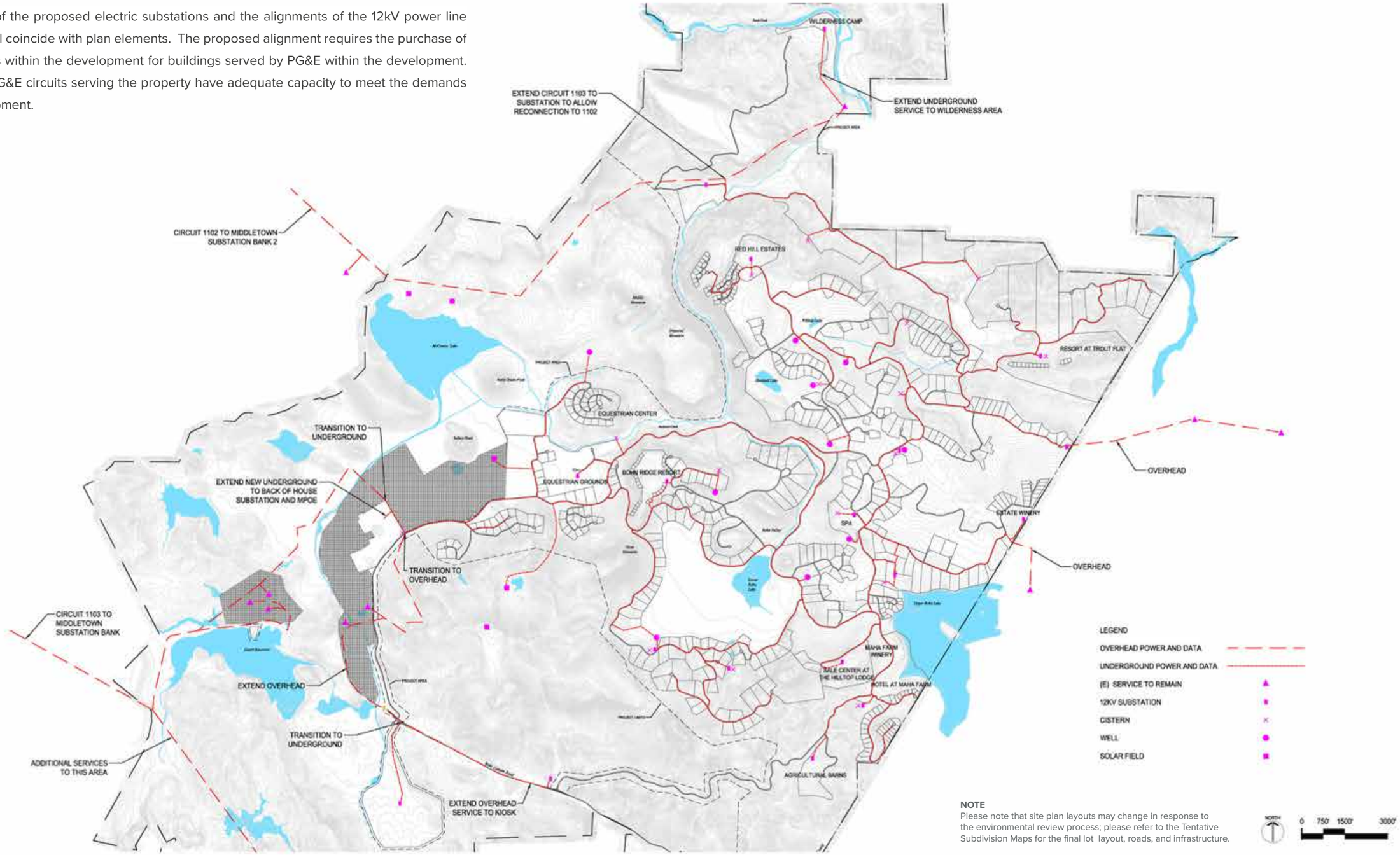
DRY UTILITIES EXISTING PG&E SERVICES

Pacific Gas and Electric (PG&E) will supply electricity to the project. Electric substations are planned at multiple locations on the site. Overhead 12KV transmission lines currently supply existing loads through the area extending east from Butts Canyon Road through an existing power line easement. The power line easements are for existing agricultural and commercial loads and will be modified as part of the tentative map. Underground electrical distribution will be extended in conjunction with roadway improvements.



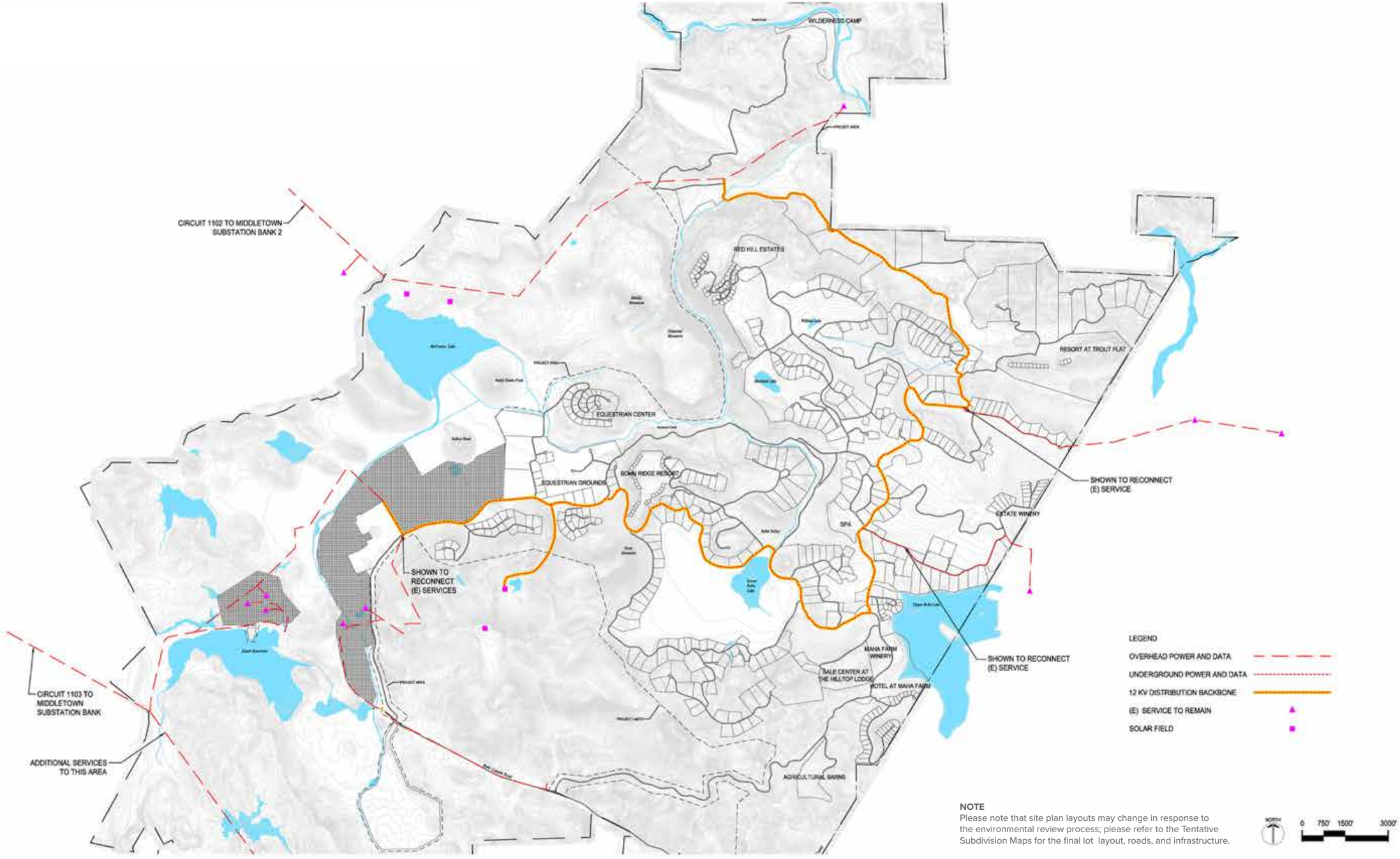
DRY UTILITIES PROPOSED 12KV DISTRIBUTION

The location of the proposed electric substations and the alignments of the 12kV power line easements will coincide with plan elements. The proposed alignment requires the purchase of PG&E facilities within the development for buildings served by PG&E within the development. The current PG&E circuits serving the property have adequate capacity to meet the demands of the development.



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

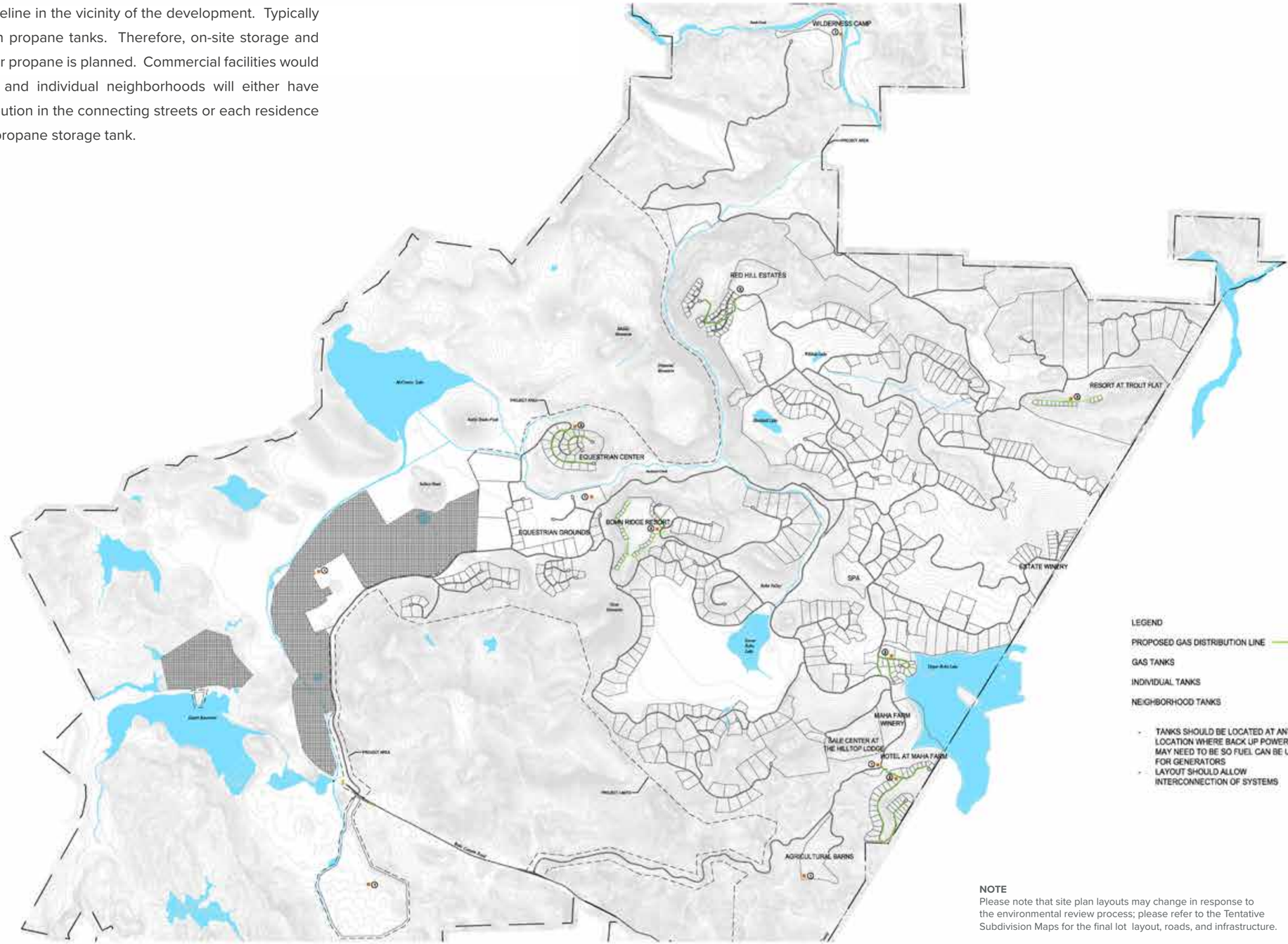
DRY UTILITIES PROPOSED 12KV UNDERGROUND BACKBONE



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

DRY UTILITIES PROPOSED GAS DISTRIBUTION

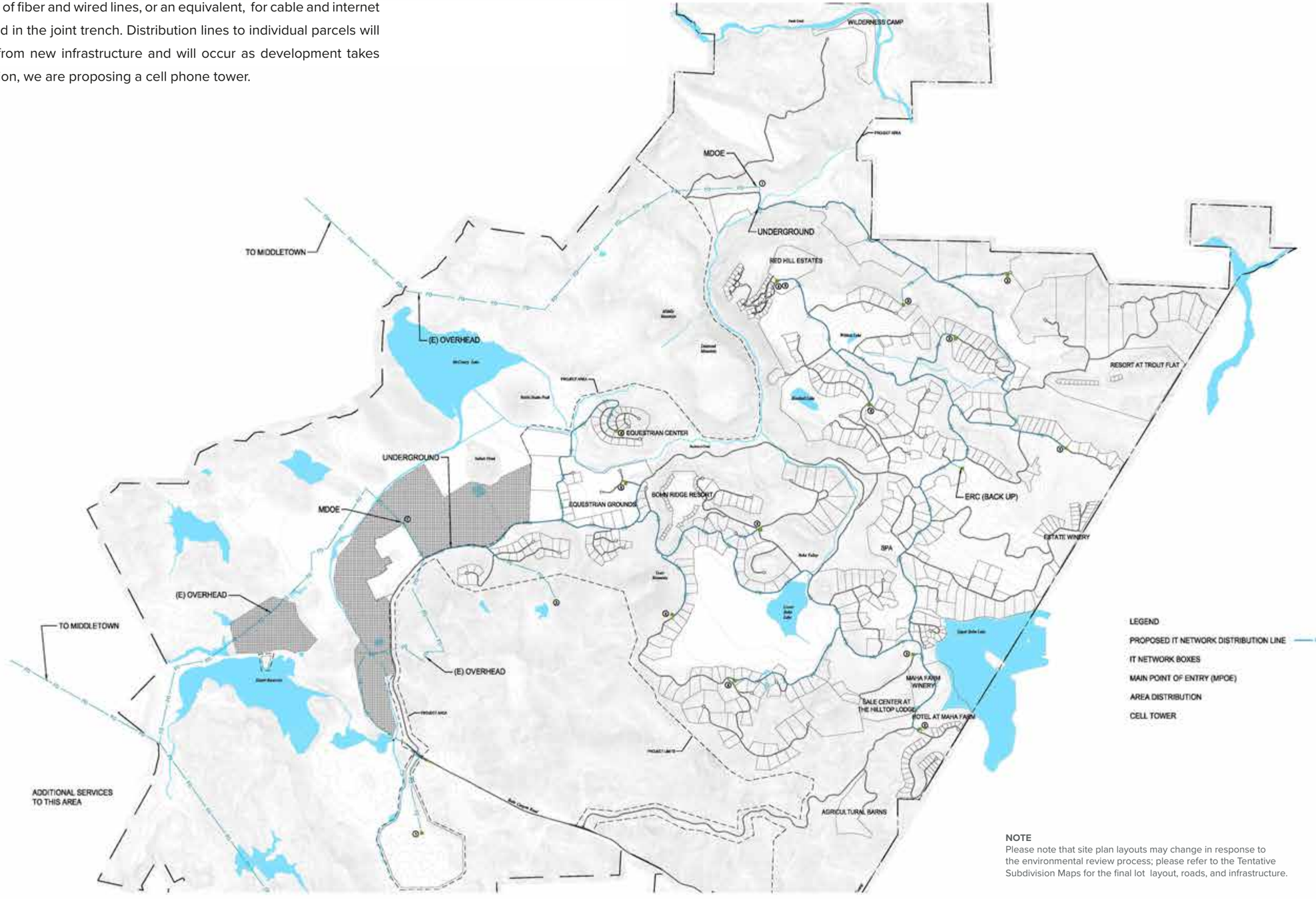
There is no natural gas pipeline in the vicinity of the development. Typically rural developments rely on propane tanks. Therefore, on-site storage and distribution of natural gas or propane is planned. Commercial facilities would have centralized facilities and individual neighborhoods will either have central facilities with distribution in the connecting streets or each residence would be provided with a propane storage tank.



NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

COMMUNICATIONS PROPOSED IT NETWORK

A combination of fiber and wired lines, or an equivalent, for cable and internet will be included in the joint trench. Distribution lines to individual parcels will be extended from new infrastructure and will occur as development takes place. In addition, we are proposing a cell phone tower.



LEGEND

PROPOSED IT NETWORK DISTRIBUTION LINE

IT NETWORK BOXES

MAIN POINT OF ENTRY (MPOE) (1)

AREA DISTRIBUTION (2)

CELL TOWER (3)

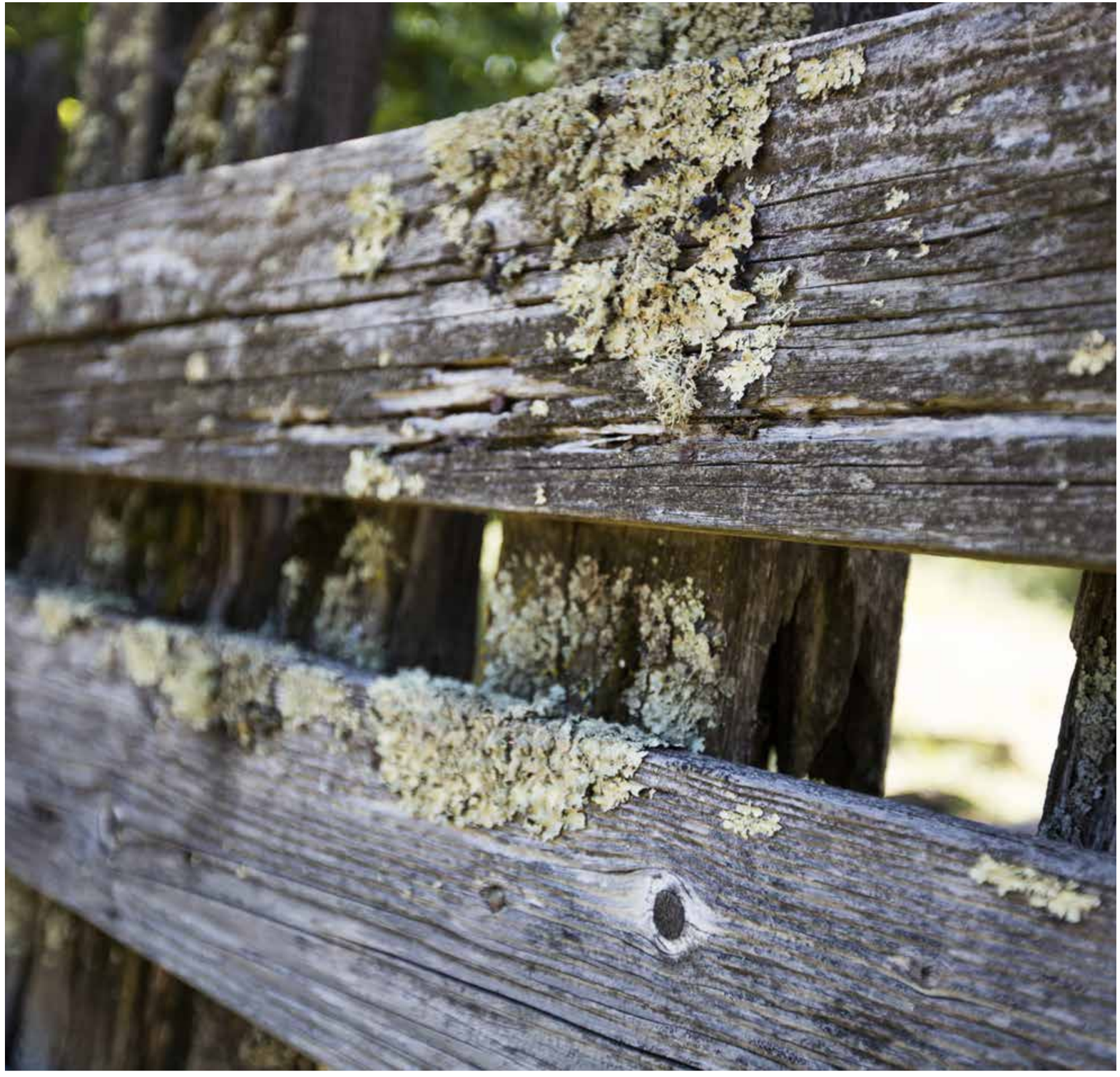
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

NORTH 0 750' 1500' 3000'

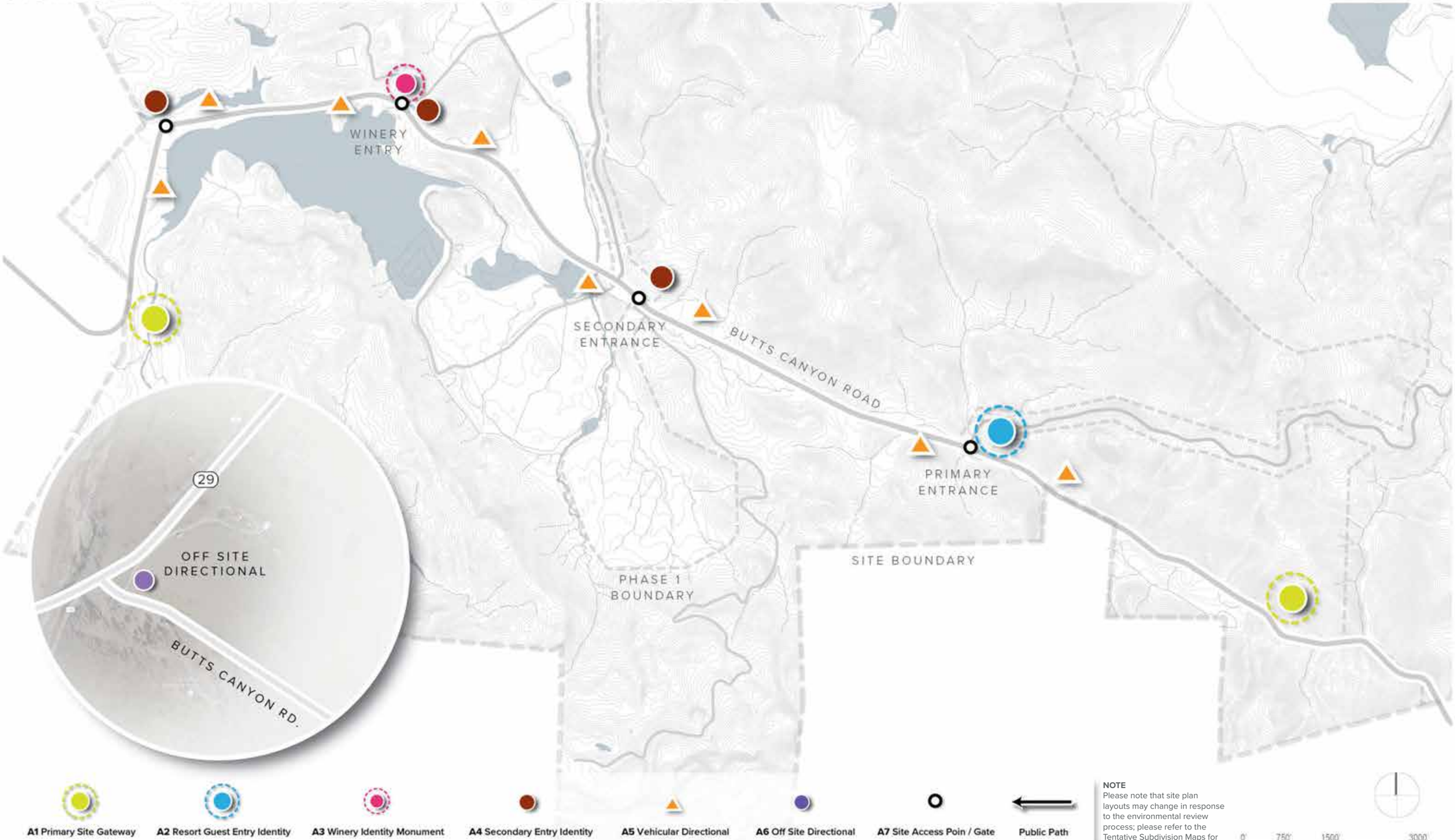
SECTION 6 PUBLIC STREETSCAPE

SIGNAGE & WAYFINDING AND FENCING

The following exhibits represent the project intentions on the aspects that are visible from the public right of way. Further detail for internal regulation of development, materials, intentions will be expanded within the Maha Design Guidelines for Guenoc Valley, forthcoming under separate cover. All fencing and signage visible to the public will adhere to the following concepts presented here.



SIGNAGE & WAYFINDING CONCEPTUAL LOCATION PLAN



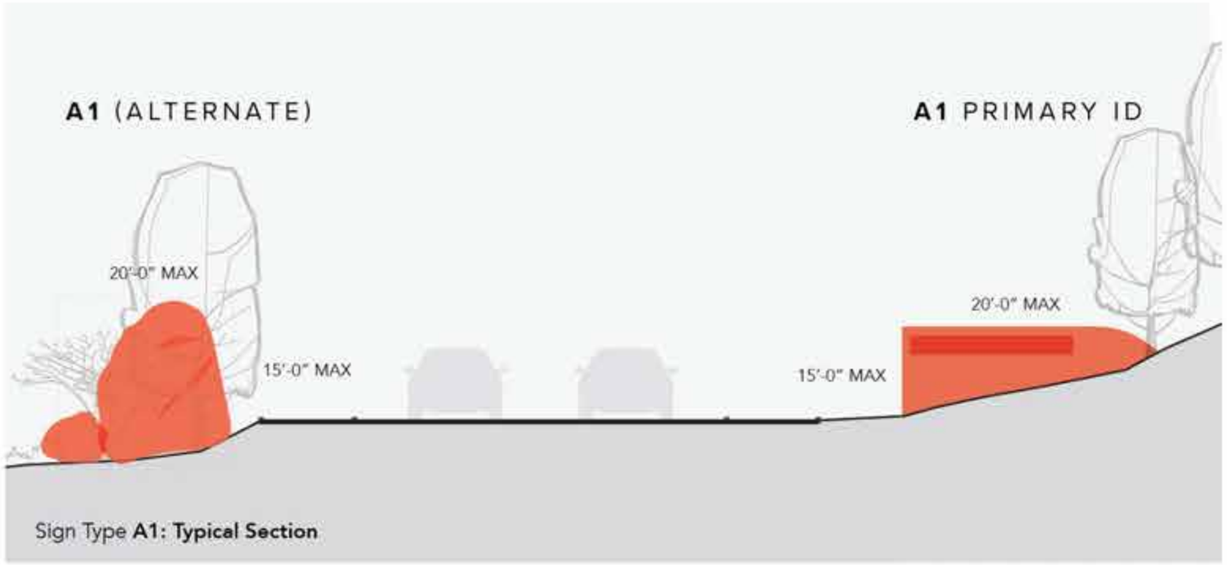
NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and

SIGNAGE & WAYFINDING SIGN SCHEDULE

SIGNAGE & WAYFINDING								CODE CONSIDERATIONS*	
Sign Type	**Name**	**Qty**	**Location**	**Max sqft**	**Max Dimensions**	**Illumination**	**Messaging**	**Applicable Code**	**Variance from Code**
A1	**Primary Site Entry Monument Sign / Sculpture**	2	Site boundaries along Butts Canyon Road	200 SqFt	Height: 10'-0" Width: 20'-0 Letter / Logo Height: Sculptural: 6'-0" Non-Sculptural: 3'-0"	Internal or External	Project Logo only.	**ZONING ARTICLE 45.12: (f)** A free-standing sign shall not exceed a height of twenty-five (25) feet at the front property line. This height may be increased to a maximum of thirty-five (35) feet by providing one (1) foot of setback for each additional foot in height.	No variance from code.
A2	**Resort Guest Entry**	1	Primary Guest Entrance to Resort	200 SqFt	Height: 10'-0" Width: 20'-0 Letter / Logo Height: Logo: 24" Address: 6"	Internal or External	Project Logo & Address only.	**ZONING ARTICLE 45.12: (f)** A free-standing sign shall not exceed a height of twenty-five (25) feet at the front property line. This height may be increased to a maximum of thirty-five (35) feet by providing one (1) foot of setback for each additional foot in height.	No variance from code.
A3	**Winery Identity**	1	Adjacent to Winery Entrance	TBD	Height: TBD Width: TBD Letter / Logo Height: Logo: 18" Address: 6"	Internal or External	Winery Logo & Address only.	**ZONING ARTICLE 45.12: (f)** A free-standing sign shall not exceed a height of twenty-five (25) feet at the front property line. This height may be increased to a maximum of thirty-five (35) feet by providing one (1) foot of setback for each additional foot in height.	As built conditions to remain. If new design is implemented, new sign must comply with code.
A4	**Secondary Entry Identity**	3	Adjacent to Secondary Entrances	36 SqFt	Height: 6'-0" Width: 6'-0 Letter / Logo Height: Logo: 18" Copy / Address: 6"	Internal or External	Project Logo, address, and / or directional copy & arrows.	**ZONING ARTICLE 45.12: (f)** A free-standing sign shall not exceed a height of twenty-five (25) feet at the front property line. This height may be increased to a maximum of thirty-five (35) feet by providing one (1) foot of setback for each additional foot in height.	No variance from code.
A5	**Vehicular Directional**	8	Precedes vehicular decision making points	24 SqFt	Height: 6'-0" Width: 4'-0 Directional Copy: 6" max.	Internal or External	Directional copy & arrows only.	**ZONING ARTICLE 45.12: (f)** A free-standing sign shall not exceed a height of twenty-five (25) feet at the front property line. This height may be increased to a maximum of thirty-five (35) feet by providing one (1) foot of setback for each additional foot in height.	No variance from code.
A6	**Off Site Identity / Directional**	1	Corner of Butts Canyon Road & Highway 29	100 SqFt	Height: 10'-0" Width: 10'-0 Letter / Logo Height: Logo: 18" Copy / Address: 8"	Internal or External	Project Logo and / or directional copy & arrows.	**ZONING ARTICLE 45 21-45.21:** One (1) outdoor advertising and off-site sign no larger than thirty-two (32) square feet in total surface area per face is permitted per lot in all districts except the "R1" and "O" base zoning districts and "SC" combining district. Temporary real estate signs not exceeding thirty-two (32) square feet are permitted in any district.	Proposed sign exceeds maximum Square Footage allowed, per Article 45.
A7	**Entry Gate**	4 (TBD)	50'-0"± from Butts Canyon Rd. at Primary Guest Entrance to Resort.	TBD	Height: 15'-0" Width: TBD Letter / Logo Height: Logo: 24" max. Copy / Address: 6" max.	External or Ambient	Project Logo and / or address.	TBD	TBD
	**** TOTAL QUANTITY:**	**16**	**** TOTAL SIGN AREA:**	**1,281 SqFt**				**ZONING ARTICLE 45 21-45.12: (a)** The total area of signing shall not exceed one (1) square foot in area for each linear foot of street or occupancy and lake frontage [...]. Lake frontage shall be used only in calculating sign areas for lake-oriented signs. All signs may be illuminated. **(e)** Notwithstanding any other provision of this section, for each individual occupancy, the total area of signs shall not exceed four hundred (400) square feet in area.	Proposed total sign area exceeds maximum total area of signs per Zoning Article 45.

* **CODE SECTIONS CONSIDERED: Zoning Article 45**
** **A7 Entry Gate not included in total quantity & total sign area.**

SIGNAGE & WAYFINDING PROJECT IDENTITY CONCEPTS

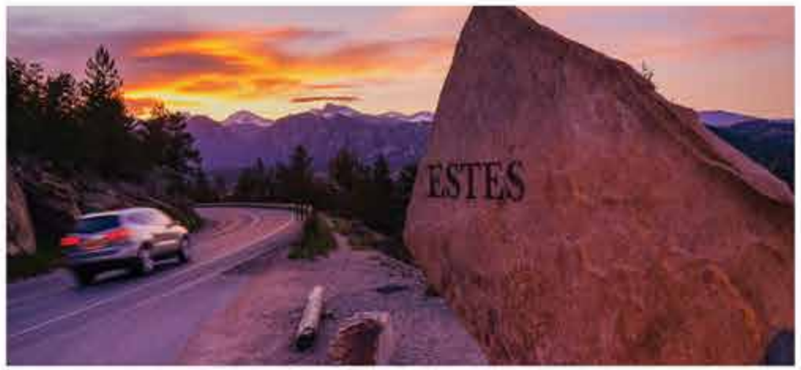


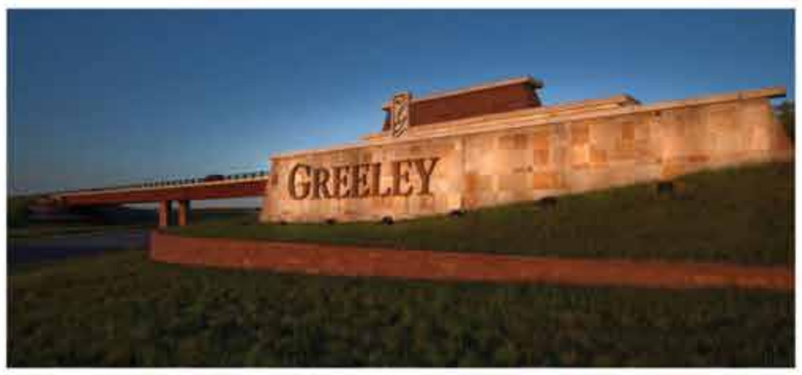
Sign Type **A1: Typical Section**

A1 PRIMARY SITE ENTRY

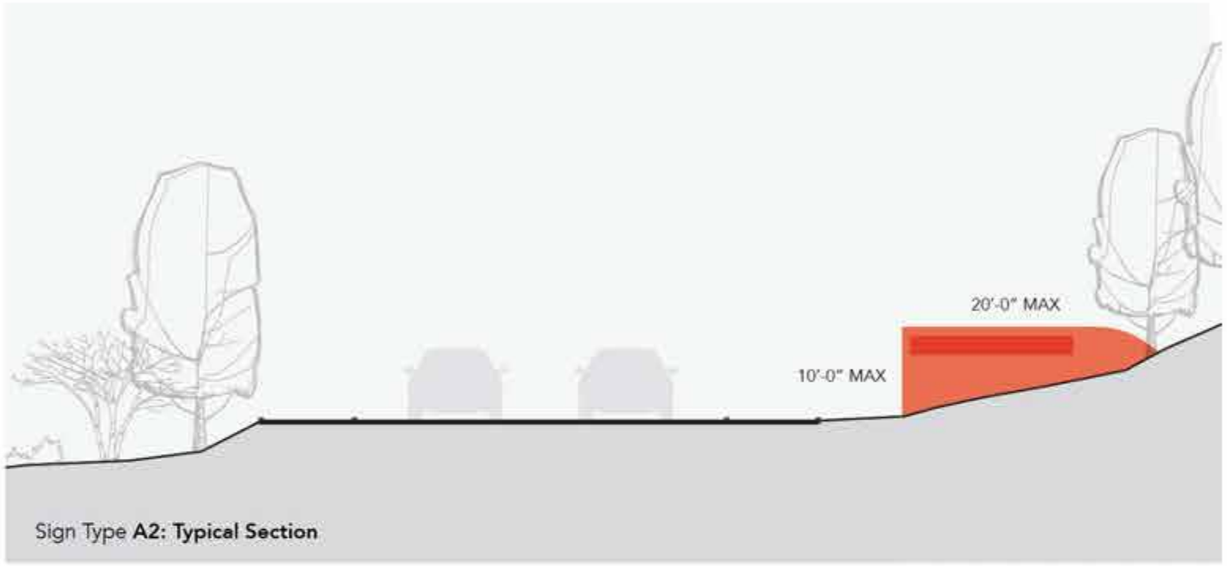
Height	15'-0" max
Width	20'-0" max
Area (SqFt)	200 SqFt max
Logo / Copy Ht.	Sculptural: 6'-0" max Non Sculptural: 3'-0" max
Quantity	2
Illumination	Internal or External

The Primary Site Entry signage acts as a welcoming identification for guests arriving to the site. Larger in scale, this project monumentation along Butts Canyon Road demarcates the project boundaries. These signs are the lead element in the hierarchy of graphics on site. Sign locations, that optimize visibility and impact, will be integrated into the roadway landscaping and topography. Materials, illumination, and other design details will relate directly to the brand vision and site architecture. A sculptural art program may also act as a series of landmarks, elevating the location and inviting the community to come enjoy.





SIGNAGE & WAYFINDING RESORT ENTRY IDENTITY CONCEPTS

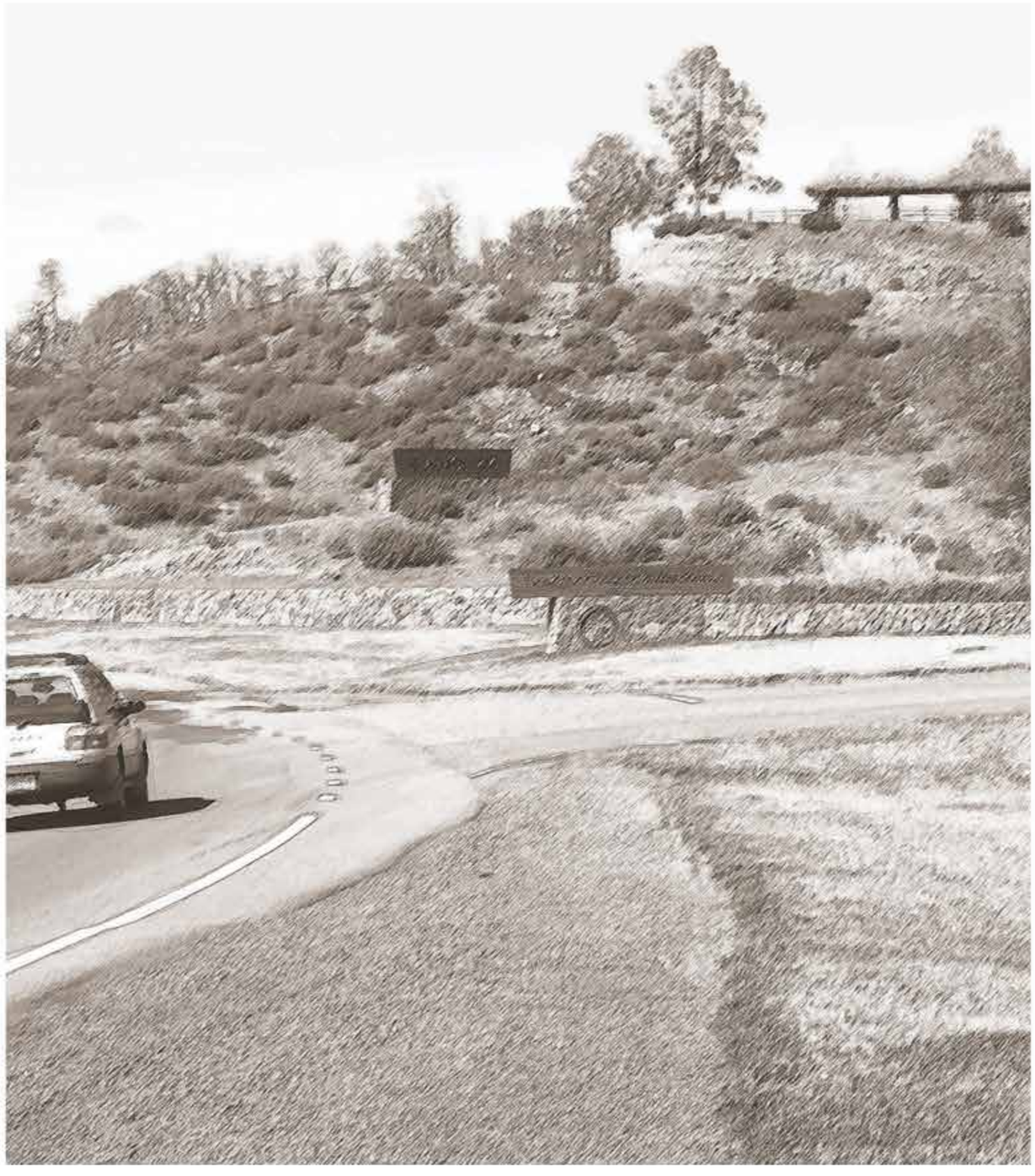


Sign Type **A2: Typical Section**

A2 RESORT GUEST ENTRY IDENTITY

Height	10'-0" max
Width	20'-0" max
Area (SqFt)	200 SqFt max
Logo / Copy Ht.	Logo: 24" max Address: 6" max
Quantity	1
Illumination	Internal or External

The Resort Guest Entry Identity sign is located at the main guest entry on Butts Canyon Road. This sign establishes a "sense of arrival" and clearly communicates the project identity and address, while establishing an expectation of quality.

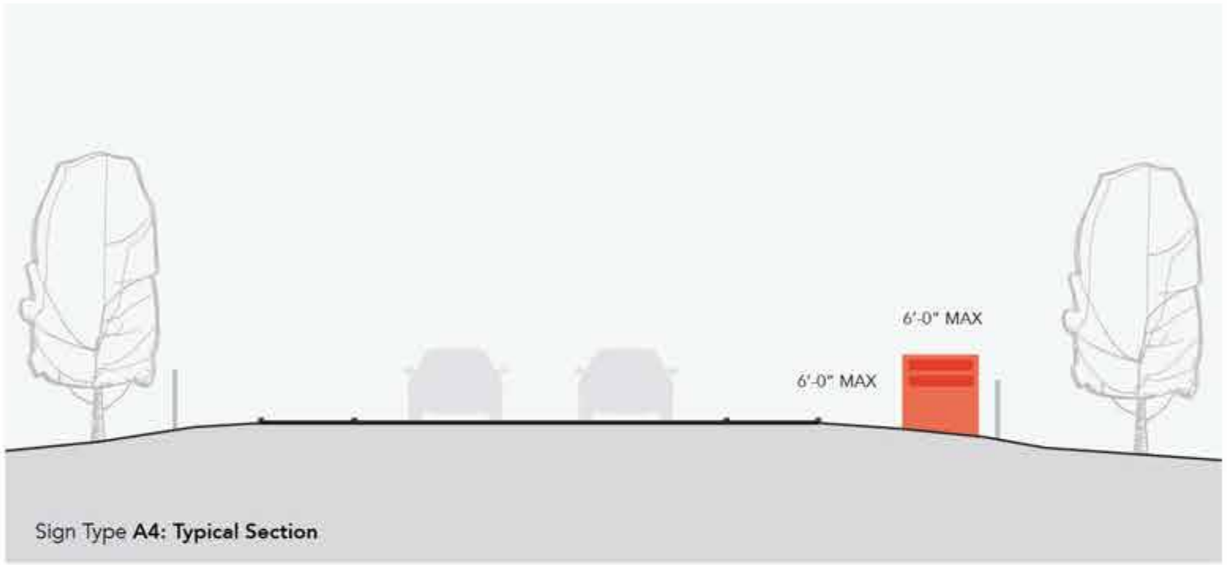


A3 WINERY ENTRY IDENTITY (EXISTING TO REMAIN)

Height	TBD
Width	TBD
Area (SqFt)	TBD
Logo / Copy Ht.	Logo: 18" max Address: 6" max
Quantity	1
Illumination	Internal or External

The existing Langtry Estate & Vineyards signage vocabulary is specific to the Langtry Estate and may differentiate the Vineyard as it's own entity within the broader Maha resort.

Project ownership to confirm, existing signage to remain, or signage will be redesigned consistent with the design vocabulary used throughout the Maha site signage.



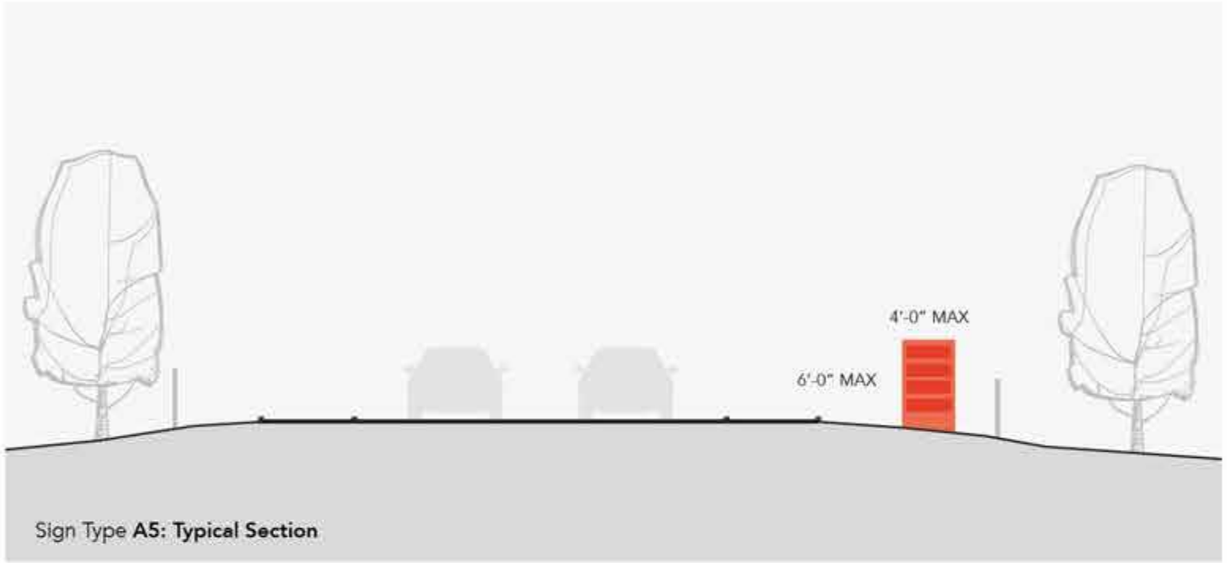
Sign Type **A4: Typical Section**

A4 SECONDARY ENTRY IDENTITY

Height	6'-0" max
Width	6'-0" max
Area (SqFt)	36 SqFt max
Logo / Copy Ht.	Logo: 18" max Copy / Address: 6" max
Quantity	3
Illumination	Internal or External

The Secondary Entry Identity is located at the alternate entrances to the resort property. It is understated when compared to the Primary Guest entrance and its primary function is to direct residents, deliveries, and staff to the proper points of entry.

SIGNAGE & WAYFINDING VEHICULAR DIRECTIONAL CONCEPTS



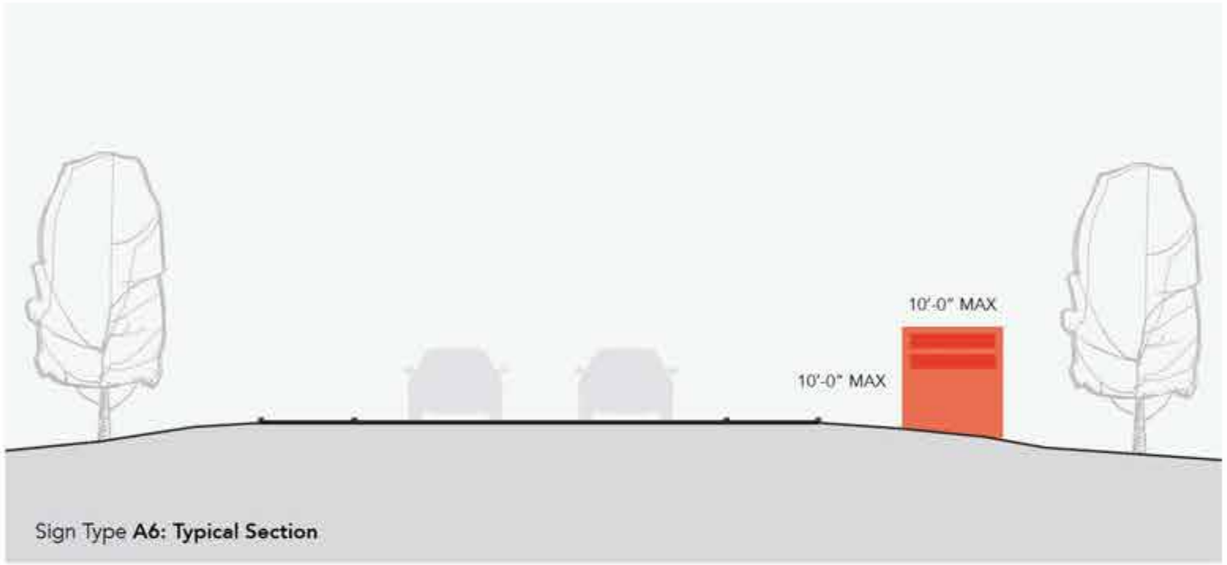
Sign Type **A5: Typical Section**

A5 VEHICULAR DIRECTIONAL

Height	6'-0" max
Width	4'-0" max
Area (SqFt)	24 SqFt max
Logo / Copy Ht.	Directional Copy: 6" max
Quantity	8
Illumination	Internal or External

The Vehicular Directional sign facilitates movement throughout the site by connecting important points along the primary path of arrival. Sign locations will anticipate decision making points, insuring that guests can read and have time to respond while driving. Strong legibility will be achieved through high contrast letter forms and appropriately sized text and arrows for the speed of travel along Butts Canyon Road.

SIGNAGE & WAYFINDING POTENTIAL OFF SITE DIRECTIONAL CONCEPTS



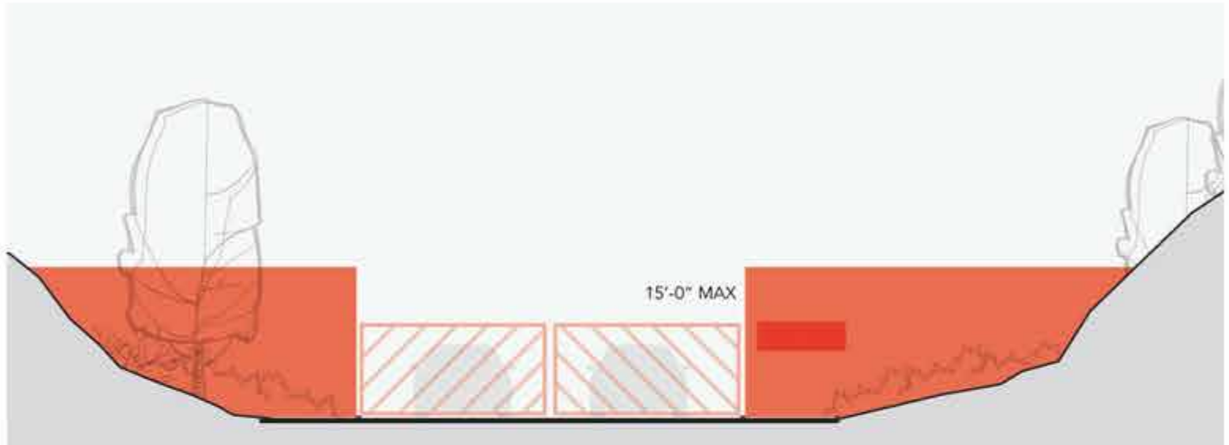
Sign Type **A6: Typical Section**

A6 OFF SITE DIRECTIONAL IDENTITY

Height	10'-0" max
Width	10'-0" max
Area (SqFt)	100 SqFt max
Logo / Copy Ht.	Logo: 18" max Directional Copy: 8" max
Quantity	1
Illumination	Internal or External

The Off Site Directional Identity acts as a welcoming signal for guests arriving to site. The primary purpose of this sign is to direct guests down Butts Canyon Road towards the resort entries. Larger in scale, this project identification and directional signage sits at the intersection of Butts Canyon Road and Highway 29.

SIGNAGE & WAYFINDING RESORT ENTRY GATE CONCEPT



Sign Type **A7: Typical Section**

A7 RESORT GUEST ENTRY GATE

Height	15'-0" max
Width	TBD
Area (SqFt)	TBD
Logo / Copy Ht.	Logo: 24" max Address: 6" max
Quantity	1
Illumination	Internal or External

The Resort Entry Gate is located approximately 50'-0" from Butts Canyon Road at the main site entry. This gate establishes a "sense of arrival" and clearly communicates the project entry and complies with the code for a gated entry on private roads.

STREET SIGNS & REGULATORY

Street name and regulatory signs may be posted at intersections, and are usually perpendicularly oriented pairs identifying each of the crossing streets. Public streets must follow design requirements per city code.

MILE MARKERS & FIRE SAFETY

Mile Markers and Fire Safety signs will be posted as required per local code. These signs will be designed to fit within the overall brand vocabulary and are intended to assist motorists, pedestrians, and the Fire Authority.

FENCING CURRENT LOCATION & STYLE

EXISTING STONE FENCE

EXISTING WHITE FENCE

EXISTING WIRE FENCE

EXISTING STONE FENCE

WINERY ENTRY

SECONDARY ENTRANCE

BUTTS CANYON ROAD

PRIMARY ENTRANCE

SITE BOUNDARY

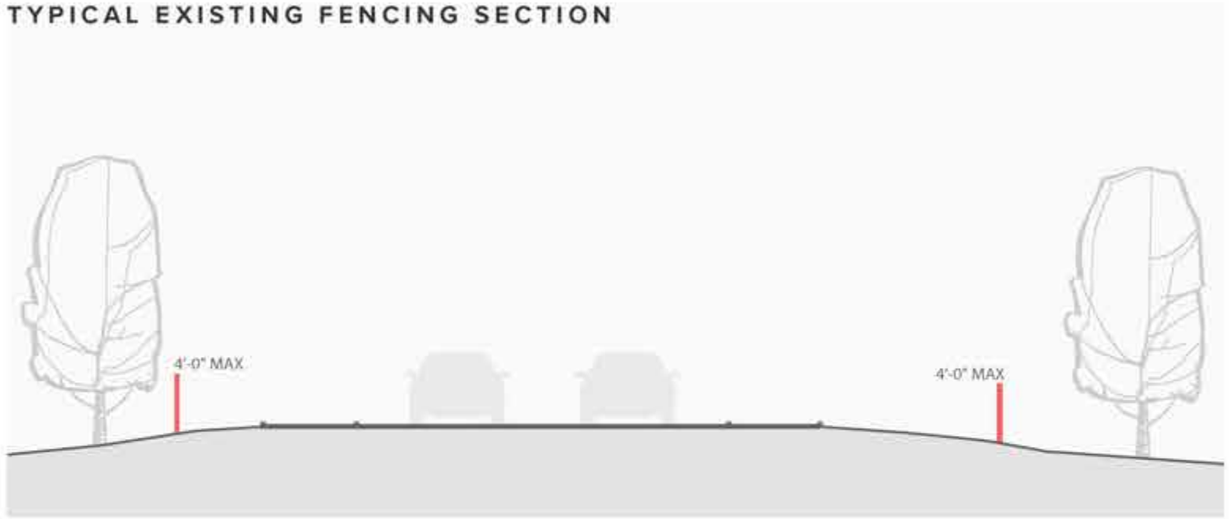
PHASE 1 BOUNDARY

NOTE
Please note that site plan layouts may change in response to the environmental review process; please refer to the Tentative Subdivision Maps for the final lot layout, roads, and infrastructure.

0' 750' 1500' 3000'

FENCING POTENTIAL FENCE TYPES VISIBLE FROM THE PUBLIC STREETSCAPE

TYPICAL EXISTING FENCING SECTION



EXISTING AND POTENTIAL FENCING CONDTION

Three types of fence are currently visible along Butts Canyon Road within the project site: white fencing, wire fencing, and stone fencing. These fence edges currently offer a distinct demarcation of the project site.

These fences may remain or eventually be replaced by three potential fence types: post and rail fencing, wire fencing, and stone and landscape edging. Any fence replacement will be maximum 4 feet tall, which follows standards set by Lake County's Fences, Hedges and Walls code. Potential new fence locations and styles will be closely integrated with the existing landscape and topography along Butts Canyon Road. Any introduced changes to fencing will improve site identity for passerbys and the arrival experience for guests.

POTENTIAL FENCE TYPES VISIBLE FROM THE PUBLIC STREETSCAPE

POST AND RAIL FENCING

WIRE FENCING

STONE & LANDSCAPE EDGE

PROJECT TEAM ACKNOWLEDGEMENTS

OWNERSHIP REPRESENTATIVE AND APPLICANT

Lotusland Investment Holdings, Inc.

DEVELOPMENT TEAM

Maha Developments
Jonathan Breene, Director
Chris Meredith, Director
Nick Fung, Director
Garry Hastings, Director
Kevin Case, Development Manager
Hal Thannisch, Development Manager
Florent Gateau, Operations

ENTITLEMENT MANAGER

Palisades Land Use
Kirsty Shelton, MS, AICP, LEED AP Principal Planner
Rachel Lenihan, Associate Planner

LEGAL

Farella Braun + Martel LLP
Katherine Philippakis, Esq.

GUENOC RANCH MANAGEMENT

Randy Sternberg, Vice President
Tiffani Moore, Administrative Manager

CIVIL ENGINEERS

Sherwood Engineers
Cody Anderson, PE Principal
Mike Hastings, PE Project Manager
Will Weddig, Project Engineer
Armeen Rassouli, Design Engineer

WATER AND WASTEWATER ENGINEERING

Fall Creek Engineering
Peter Haase, M.S., P.E., Principal Engineer
Janice Westlake, P.E., Senior Associate Engineer

ELECTRICAL ENGINEERING

Axiom Engineers
Ray Cole, Principal President CEO
Jay Kohler, P.E., Principal
Adam Bayer, P.E., Principal

ARCHITECTS

Backen & Gillam
Howard Backen, Principal
Marta Alabau, Architect & Director of Operations
Kyle Busald, Architect
Laura Riggs, Architect
Jolanta Gorecki, Architect

Bunnag Architects
Lek Bunnag, Founder & Managing Director
Louisa Bunnag, Co-founder & Executive Director

Design Realization
Ed Tuttle, Principal Architect
Leonie Delussanet, Architect
Jean Cadillac, Architect

Denniston International
Jean-Michel Gathy, Principal Architect
David Ogilby, Master Planner and Design Architect

Figueras Design Group (FDG)
Ignacio Figueras, Partner
Juan Ignacio Ramos, Partner
Ignacio Ramos, Partner

Kerry Hill Architects
Kerry Hill, Principal Architect
Justin Hill, Director
Bernard Lee, Director

Renaissance Golf Design
Tom Doak, Golf Course Architect

Verse Design LA
Paul R. Tang, Principals
Courtenay Bauer, Principals
Chris Oladapo, Senior Designer
Marailiana Ramos, Senior Associate

Tented Camp Area Designer
Jan Kortland, Designer

LANDSCAPE ARCHITECTS

Horizon and Atmosphere Landscape Co. Ltd.
Henry Lu, Principal
Hanni Tang, Landscape Architect

Prunuske Chatham, Inc.
Maggie Jensen, Landscape Architect
Mike Jensen, Landscape Architect

SWA
Joe Runco, Managing Principal
Hui-Li Lee, Principal
Emily Schlickman, Associate
Alison Ecker, Designer
Xiaoyin Kuang, Designer

SIGNAGE AND WAYFINDING

RSM Design
Martin E Schwarts, Principal
Aaron Ferber, Associate

FARMING CONSULTANT

LIFT Economy
Erin Axelrod, Partner/worker-owner
Logan Yonavjak, Specialist

ARTISTIC RENDERING

Tom McClure

GRAPHIC DESIGNERS

MRKT
Ben Coppelman, Director
Nicole Hitchins, Graphic Designer

APPENDIX ATTM

AIR TRANSPORTATION TECHNICAL MEMO

Guenoc Valley Mixed Use Development Project

Air Transportation Technical Memo

FINAL

June 3, 2020

Contents

1. Jacobs 2
2. Air Transportation 3
2.1 Purpose and Need for Air Transportation Infrastructure 3
2.2 Location of Air Transportation Infrastructure 3
2.3 Air Transportation Infrastructure Timing 5
2.4 Air Transportation Standard Operating Procedures 5
3. Typical Modern Air Transportation Fleet Mix 6
3.1 Emergency Heliport– Emergency Response Center 6
3.2 Guest Heliport – Detert Reservoir Base 7
3.3 Seaplane Base – Detert Reservoir 8
4. Air Transportation Infrastructure Conceptual Designs 9
4.1 Heliport Design Standards 9
4.1.1 Emergency Heliport – Emergency Response Center 10
4.1.2 Guest Heliport – Detert Reservoir 11
4.2 Seaplane Base Design Standards 12
4.2.1 Seaplane Base – Detert Reservoir 12
5. Noise Contours 13
5.1 Flight Paths 13
5.2 Anticipated Number of Operations 14
5.3 Noise Contours 15

Appendix A. Aviation Environmental Design Tool (AEDT) Data

© Copyright 2020 Please select a legal entity from the Change Document Details option on the Jacobs ribbon. The concepts and information contained in this document are the property of Jacobs. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright.

Limitation: This document has been prepared on behalf of, and for the exclusive use of Jacobs' client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this document by any third party.

1. Jacobs

Established in 1947 and operating for 73 years, Jacobs is a publicly traded company (NYSE: J) with more than 52,000 people worldwide, including more than 3,100 in California. Our focus on building long-term client relationships has helped us become one of the most diverse providers of technical, professional, and construction services, including all aspects of architecture, engineering, construction, operations and maintenance (O&M), and specialty consulting. More than 95% of our work is repeat business. We get to know our customers' businesses intimately, and partner with them to help them achieve their objectives.

As the industry's leading provider of comprehensive aviation services, Jacobs draws on our 50+ years of experience supporting airport clients at every phase of project development, from planning through design and construction, to facilities management and O&M. Our planners, engineers, architects, and consultants are able to address special concerns such as rapid response to unforeseen needs by reaching back to our global network of aviation experts. We deliver projects in complex and dynamic operating environments under multiple funding scenarios—both public and private. Having former airport operators on our team, we understand airport, airline, and general aviation operations and maintain excellent relationships with the Federal Aviation Administration (FAA), California Department of Transportation (Caltrans) Division of Aeronautics and the Transportation Security Administration (TSA).

Our professionals have designed airport and airline-related facilities, including runways, taxiways, taxilanes, heliports, seaplane bases, aprons, fueling systems, instrument landing systems, security features, terminal buildings, maintenance hangars, aircraft rescue and firefighting (ARFF) stations, and other ancillary airside and landside facilities at over 400 airports worldwide, including each of the top 30 airports in the United States.

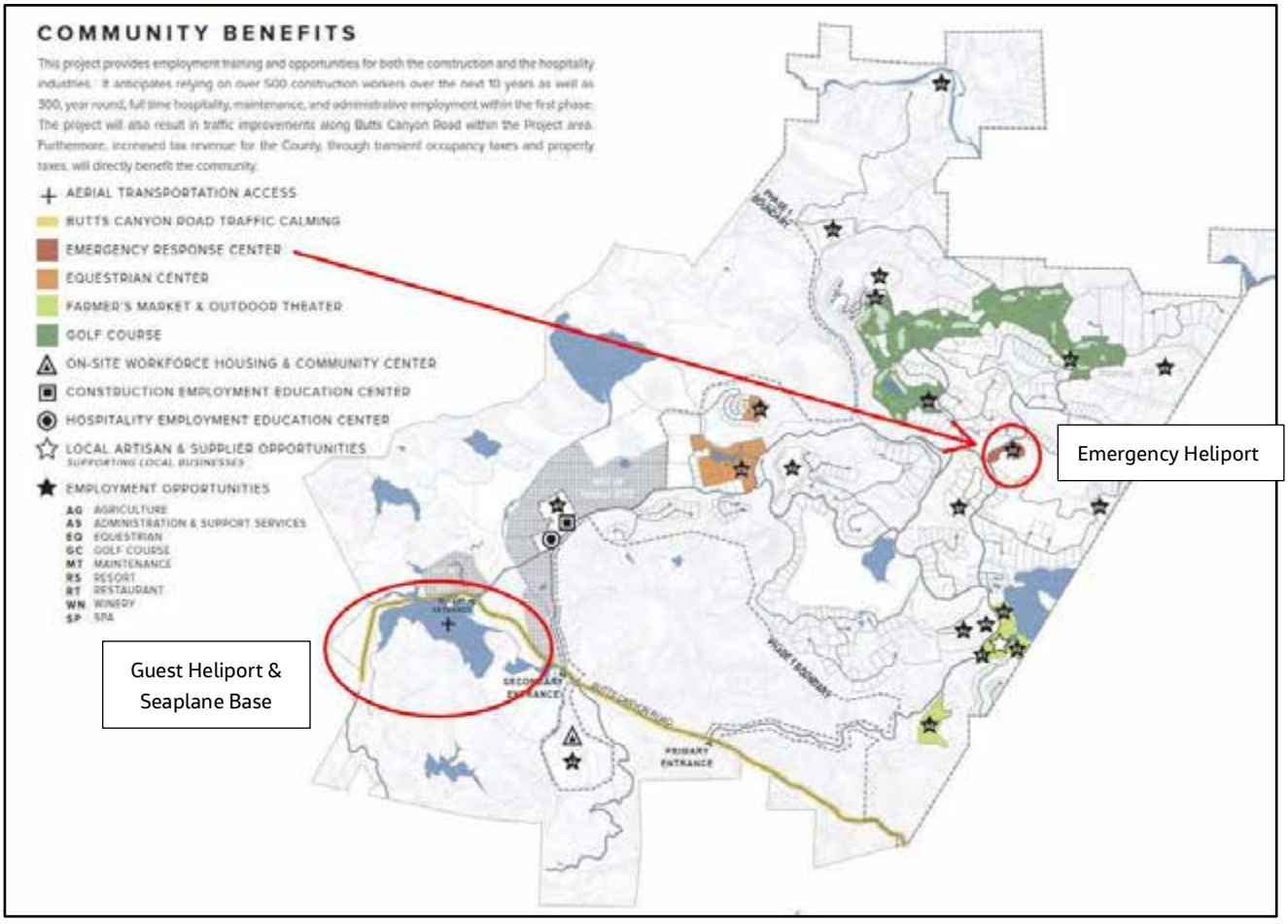
2. Air Transportation

The Guenoc Valley Mixed Use Project ("Guenoc Project") is located on the Guenoc Ranch, an aproxmiate 16,000-acre site ("Guenoc Ranch") that is located six miles southeast of the unincorporated town of Middletown on the southeast border of Lake County, bordering Yolo and Napa Counties to the south and east, with primary access along Butts Canyon Road. It is bordered by Hidden Valley Lake community to the northwest, which is undergoing continued development. The Guenoc Project request includes an emergency heliport, a heliport for resort guests and a seaplane base.

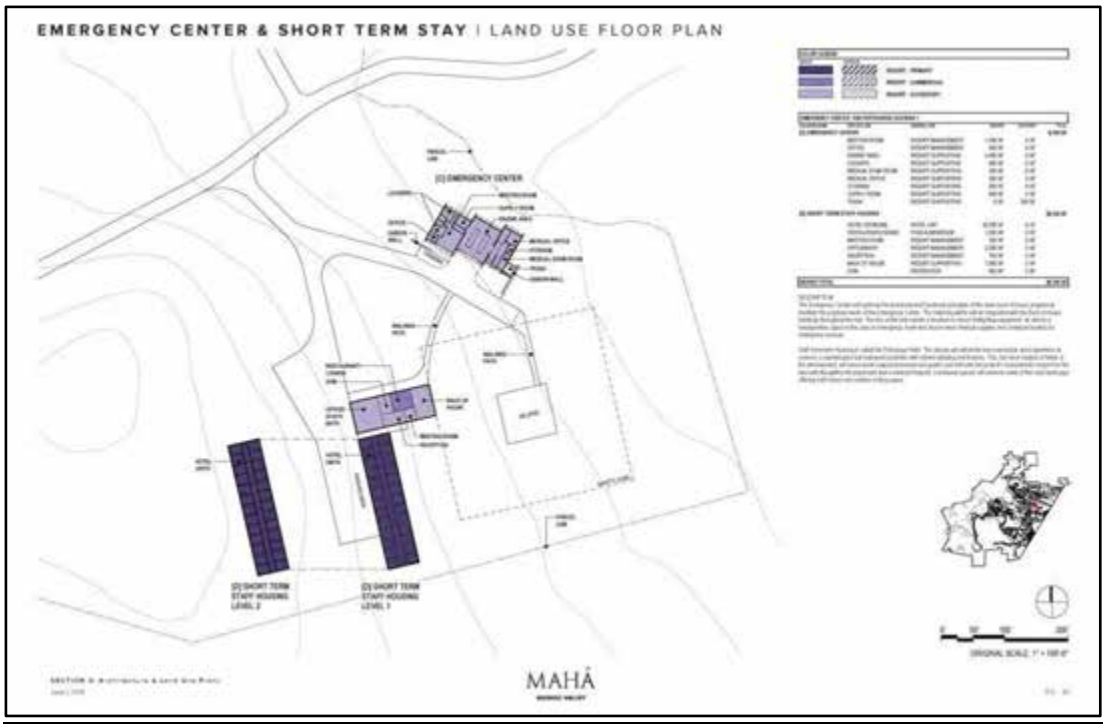
2.1 Purpose and Need for Air Transportation Infrastructure

The emergency heliport is envisioned to quickly transport any resort guests or staff that may incur a critical injury that is time-sensitive where transport by ambulance would be impractical. The emergency heliport could also provide helicopter support from CalFire assets in the event of a wildfire or other natural disaster. The second guest heliport and the seaplane base are envisioned for guest and resident access to the Guenoc Ranch by air in a helicopter or seaplane in lieu of ground transportation. Air transportation to the Guenoc Ranch would be faster and provide a unique experience in comparison to ground transportation, indirectly relieving surface transportation congestion within the local ground transportation infrastructure.

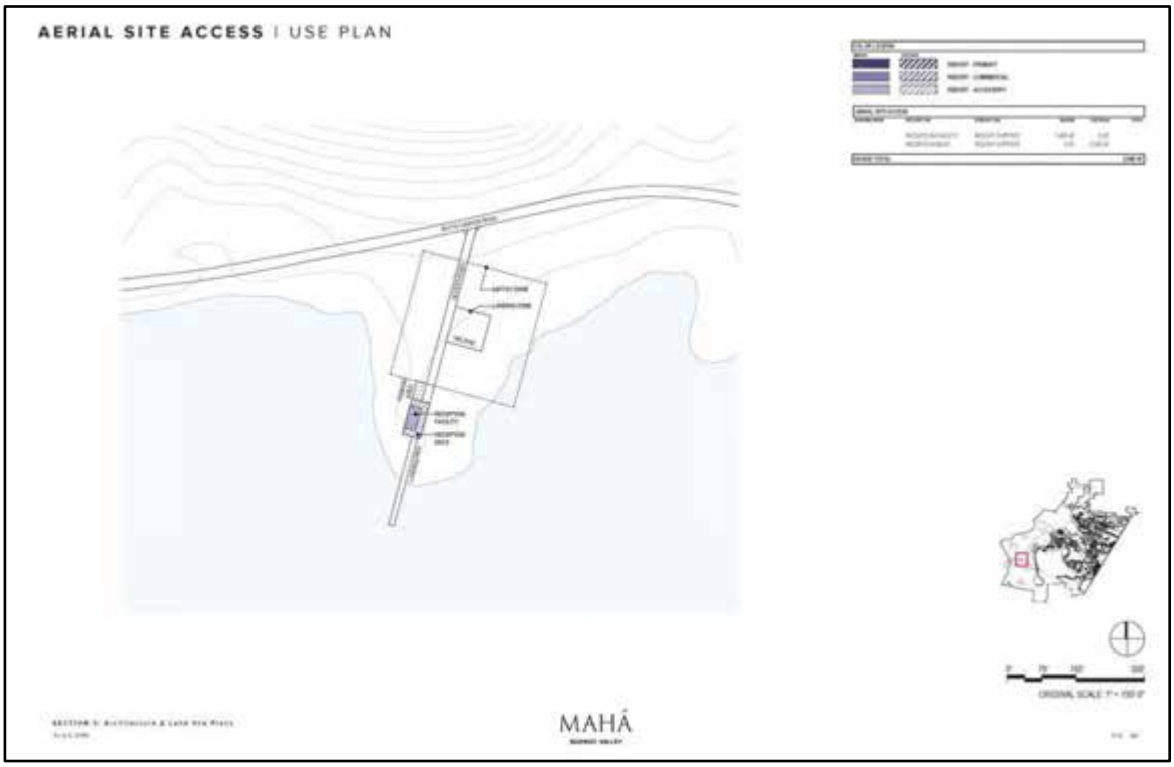
2.2 Location of Air Transportation Infrastructure



a. The Emergency Heliport will be located at the Emergency Response Center. The Emergency Response Center is located in the north eastern part of the resort.



b. The Guest Heliport and the Seaplane Base are collocated at Detert Reservoir, accessed from Butts Canyon Road, on the west side northerly to the existing entrance to the Langtry Winery.



2.3 Air Transportation Infrastructure Timing

a. First phase of construction – Emergency Heliport – Emergency Response Center
b. Future phases include – Guest Heliport and the Seaplane Base – Detert Reservoir

2.4 Air Transportation Standard Operating Procedures

- All reservations for any arrival via helicopter and seaplane must be received 24 hours in advance.
- Reservations will be accepted with set service to be available seven days a week from 2 hour after sunrise to one 1 hour before sunset.
- Chauffeur will let pilot know of the estimated arrival time to the helipad or seaplane base.
- Guests will be met by the pilot and escorted to the aircraft.
- Refreshments will be offered before wheels up and available during the flight.
- Flight path will differ based upon client wishes, a typical base path includes:
    - Depart from SFO, OAK, SJC and/or Sausalito base
    - Fly past golden gate and over Marin county
    - Follow coastal line
    - Past Sonoma head to the Guenoc Ranch.
    - Depart from SMF direct to Detert Reservoir
- All arriving helicopters and seaplane will notify the Guenoc Ranch dispatcher.
- Greeter and or other specified ground transportation will be waiting at base.
- Assistance with off loading clients will be offered, step stool, hand assistance and or support.
- Car will then proceed to take guest to the Guenoc Ranch.

3. Typical Modern Air Transportation Fleet Mix

3.1 Emergency Heliport– Emergency Response Center

a. CalFire Helicopters
   - In support of its ground forces, CAL FIRE has an air fleet of airtankers, helicopters and air tactical planes. From 13 air attack and nine helitack bases located statewide, aircraft can reach most fires within 20 minutes. The air tactical aircraft fly overhead directing the airtankers and helicopters to critical areas of the fire for retardant and water drops. While both airtankers and helicopters are equipped to carry fire retardant and water, the helicopters can also transport firefighters, equipment and injured personnel. CalFire harbors 12 UH-1H Super Huey Helicopters.

b. Area Hospital Helicopter Transport
   - The Zuckerberg San Francisco General Hospital and Trauma Center is a public hospital in San Francisco, California under the purview of the city's Department of Public Health. It serves as the only Level I Trauma Center for the 1.5 million residents of San Francisco and northern San Mateo County. Eurocopter EC 135 pictured below.

   - UC Davis - UC David Medical Center a nationally recognized academic medical center offering primary care for all ages, specialty care in 150 fields, and the latest treatment options and expertise for the most complex health conditions; nationally ranked in multiple specialties.

c. California Highway Patrol Helicopter
   - The main helicopter used by the California Highway patrol is the Eurocopter A350. This helicopter has a 35-foot rotor diameter.

3.2 Guest Heliport – Detert Reservoir Base

a. Executive Transport Helicopters
   - The Sikorsky S-76D Executive Helicopter is one of the highest rated executive helicopters in the world and it has a capacity of 13 passengers and two crew members. It has a rotor diameter of 44 feet.

   - The Bell 427 is a twin-engine executive transport helicopter that offers club seating for up to seven (7) passengers and has a cruise speed of 140 knots.

3.3 Seaplane Base – Detert Reservoir

a. Typical transport seaplanes

- The Cessna 208 "Caravan" is one of the most popular seaplanes in the world. It holds 10 to 14 passengers and has a range of over 800 miles. Due to the popularity and the likelihood that the Cessna 208 will be used at Maha Farms Resort, Jacobs will use it as our design aircraft for the sea plane base. The Cessna 208 requires 2,341 feet of water run and 3,660 ft of total take off distance. The Cessna 208 is also an amphibious aircraft, meaning that it can take off and land both on land and water.

- The de Havilland Canada DHC-2 Beaver is a single-engine aircraft that can carry six (6) passengers and has a cruise speed of 143 mph.

4. Air Transportation Infrastructure Conceptual Designs

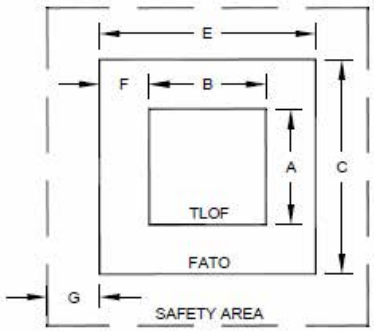
4.1 Heliport Design Standards

Conceptual planning and initial design for the heliports referenced the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5390-2C; Heliport Design. The AC provides guidance to assist operators in planning, designing and construction of heliports and associated facilities.

Table 2-1. Minimum VFR Safety Area Width as a Function of General Aviation and PPR Heliport Markings

General aviation heliports	⅓ RD but not less than 20 ft (6 m)**	⅓ RD but not less than 30 ft (9 m)**	½D but not less than 20 ft (6 m)	½ D but not less than 30 ft (9 m)
PPR heliports	⅓ RD but not less than 10 ft (3 m) **	⅓ RD but not less than 20 ft (6 m)**	½ D but not less than 20 ft (6 m)	½ D but not less than 30 ft (9 m)
TLOF perimeter marked	Yes	Yes	No	No
FATO perimeter marked	Yes	Yes	Yes	Yes
Standard "H" marking	Yes	No	Yes	No

D: Overall length of the design helicopter
RD: Rotor diameter of the design helicopter
** Also applies when the FATO is not marked. Do not mark the FATO if (a) the FATO (or part of the FATO) is a non-load bearing surface and/or (b) the TLOF is elevated above the level of a surrounding load-bearing area.

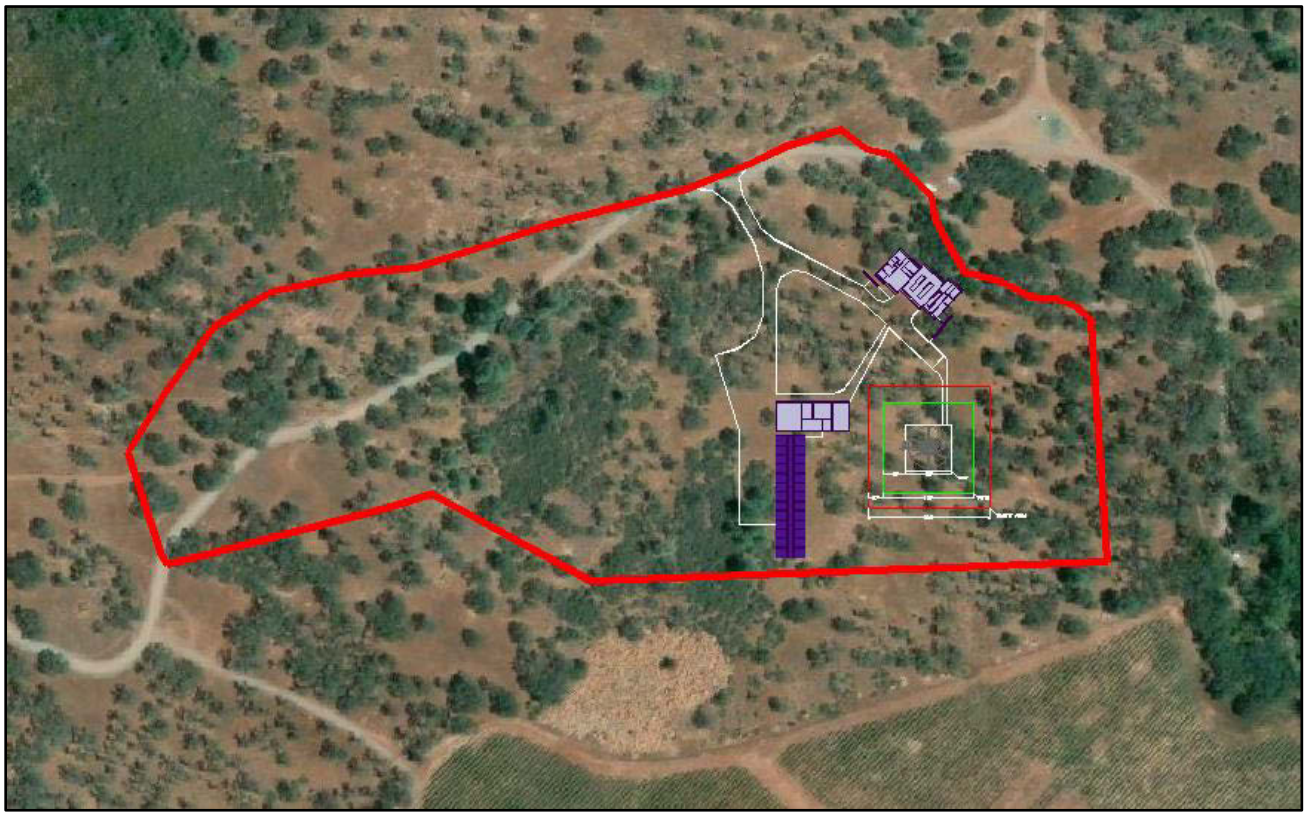


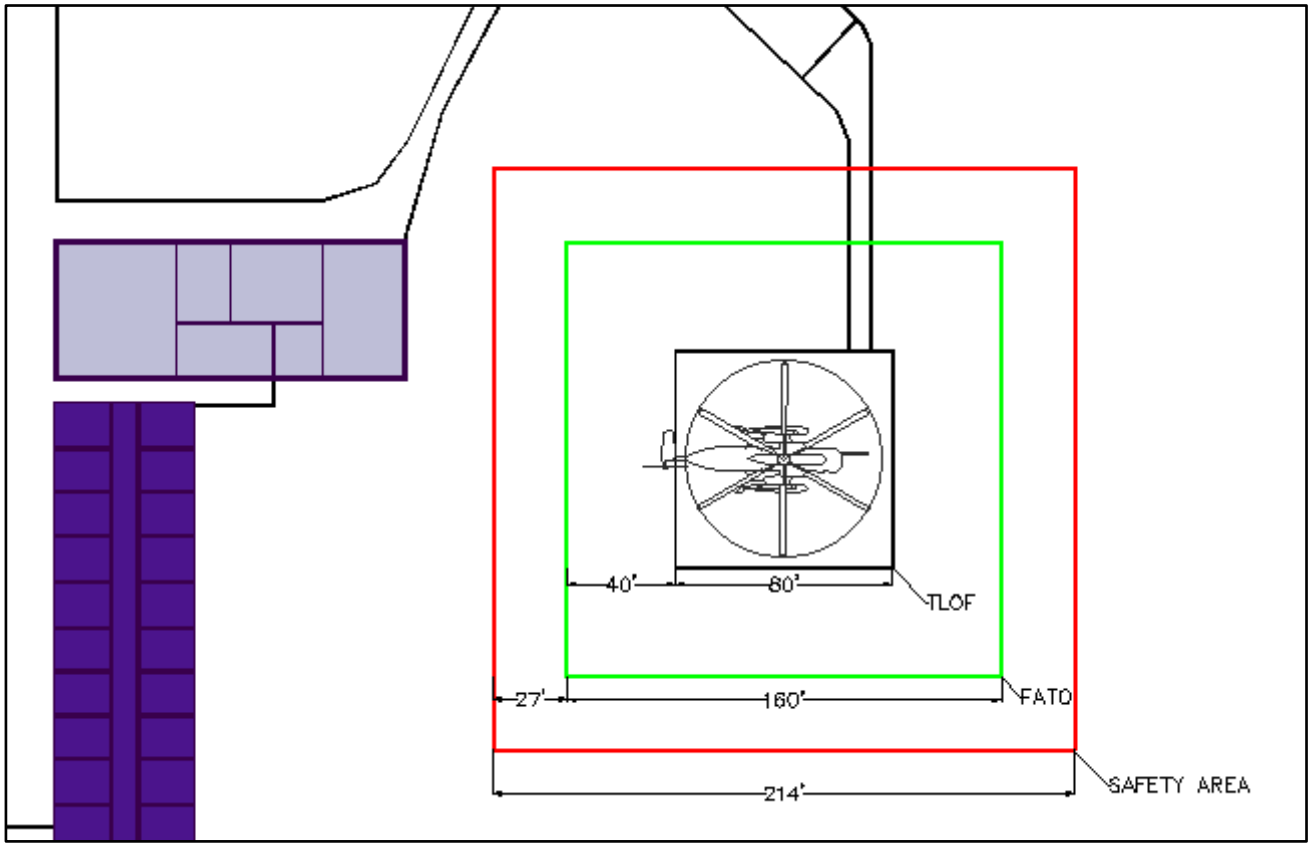
DIM	ITEM	VALUE	NOTES
A	Minimum TLOF Length	1 RD	
B	Minimum TLOF Width	1 RD	
C	Minimum FATO Length	1 ½ D	See Paragraph 207.a.(1) and Figure 2-5 for adjustments of elevations above 1000'
E	Minimum FATO Width	1 ½ D	
F	Minimum Separation Between the Perimeters of the TLOF and FATO	¾ D - ½ RD	
G	Minimum Safety Area Width	See Table 2-1	

Note: For a circular TLOF and FATO, dimensions A, B, C and E refer to diameters.

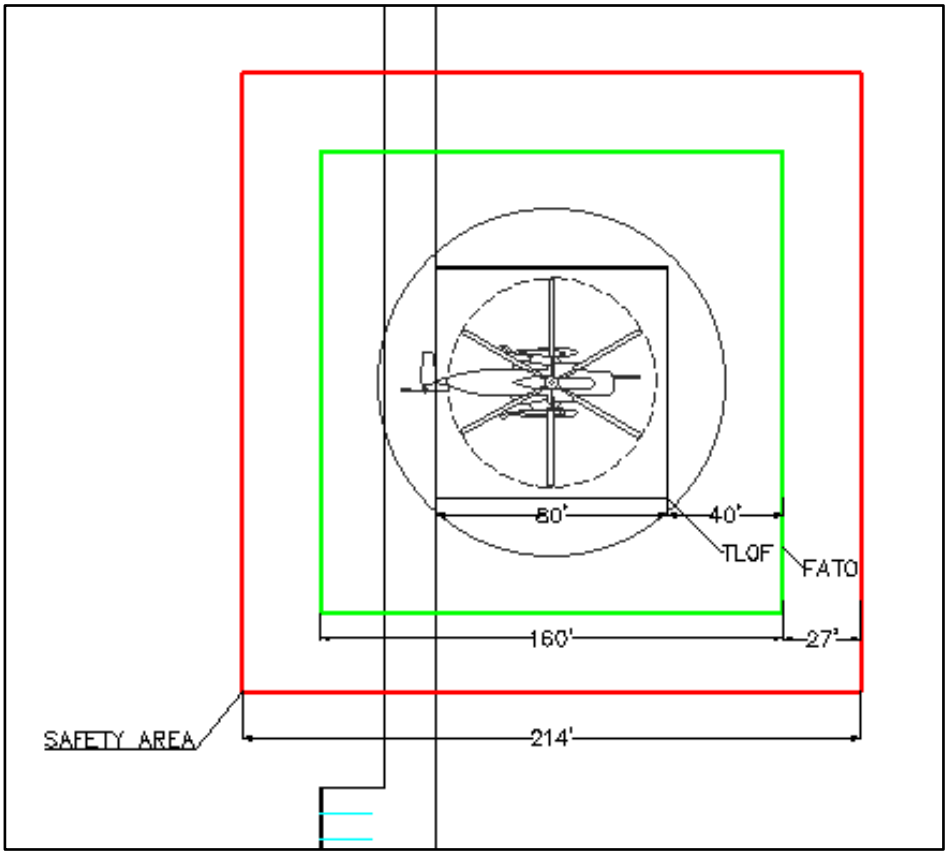
Figure 2–2. TLOF/FATO Safety Area Relationships and Minimum Dimensions: General Aviation

4.1.1 Emergency Heliport – Emergency Response Center





4.1.2 Guest Heliport – Detert Reservoir



4.2 Seaplane Base Design Standards

Conceptual planning and initial design for the seaplane base referenced the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5395-1B; Seaplane Bases. The AC provides guidance to assist operators in planning, designing and construction of seaplane bases and associated facilities.

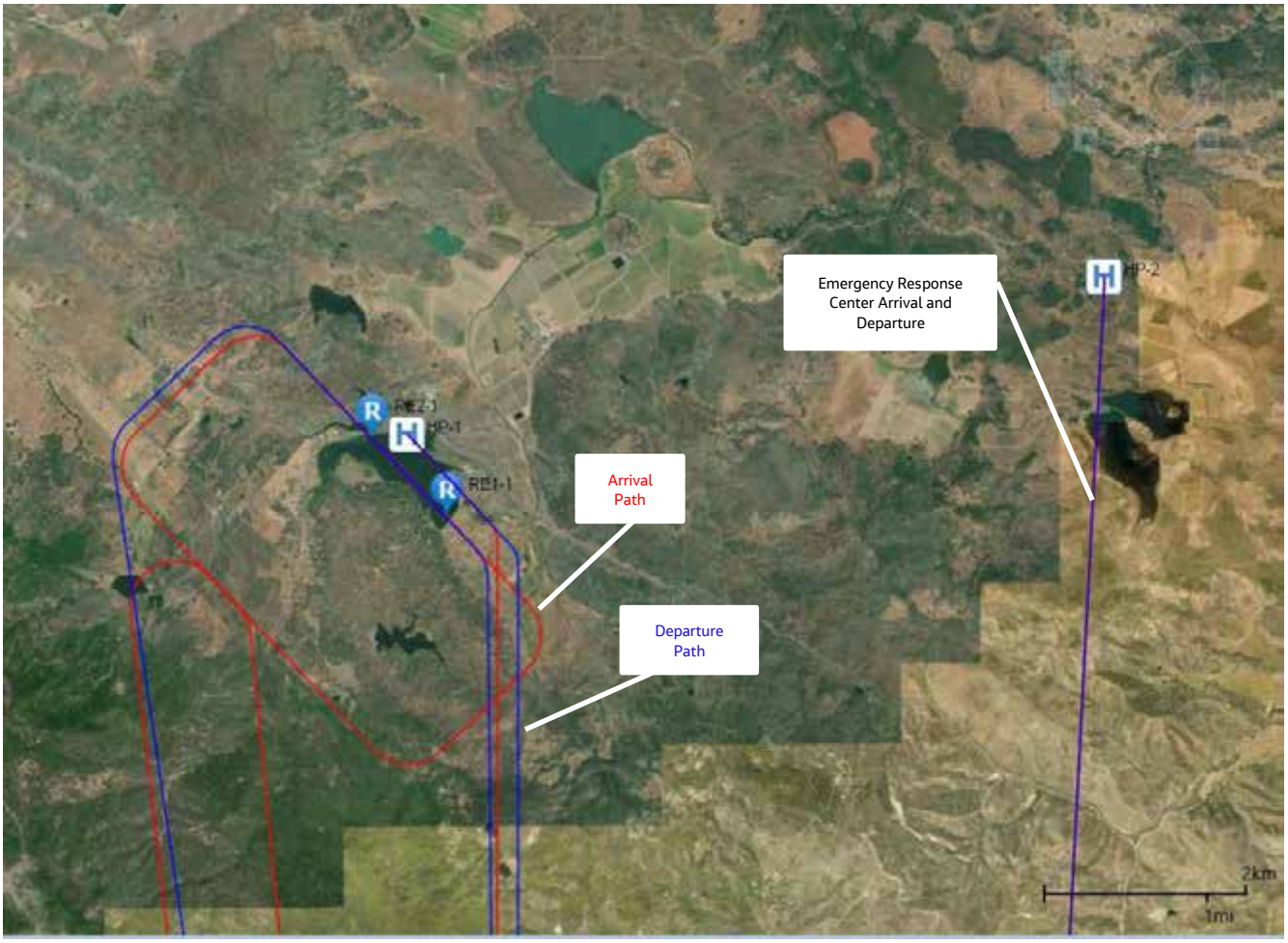
4.2.1 Seaplane Base – Detert Reservoir

5. Noise Contours

Preliminary noise contours were prepared as part of the project using the Aviation Environmental Design Tool (AEDT) software. The following sections describe the assumptions used to obtain the noise contours.

5.1 Flight Paths

Guests and residents of Guenoc Ranch would arrive or depart from one of the regional international airports via private jet or commercial airline. The regional international airports within an approximate one hour flight time by helicopter or seaplane are: San Francisco International (SFO), Oakland International (OAK), San Jose International (SJC) and Sacramento International (SMF). The assumption is that helicopter and seaplane flights to/from Guenoc Ranch would be made during daylight hours in Visual Meterorlogical Conditions (VMC) flying under Visual Flight Rules (VFR). Flight paths were modelled for the two Heliports as well as for the Seaplane Base on the Detert Reservoir. The flights paths are depicted below. Arrival paths are depicted in red and departure paths in blue. A conventional left turn traffic pattern was assumed for the arrivals to the seaplane base; departures from the seaplane base were assumed to use a left or right turn towards the south depending on the wind direction. The Emergency Response Center Heliport includes a direct approach and departure path to the south and the Detert Reservoir Heliport includes flight paths parallel to the seabase flight paths as depicted below. A modification of the traffic patterns, especially far away from the landing/departure areas is not anticipated to have major impacts on the results.



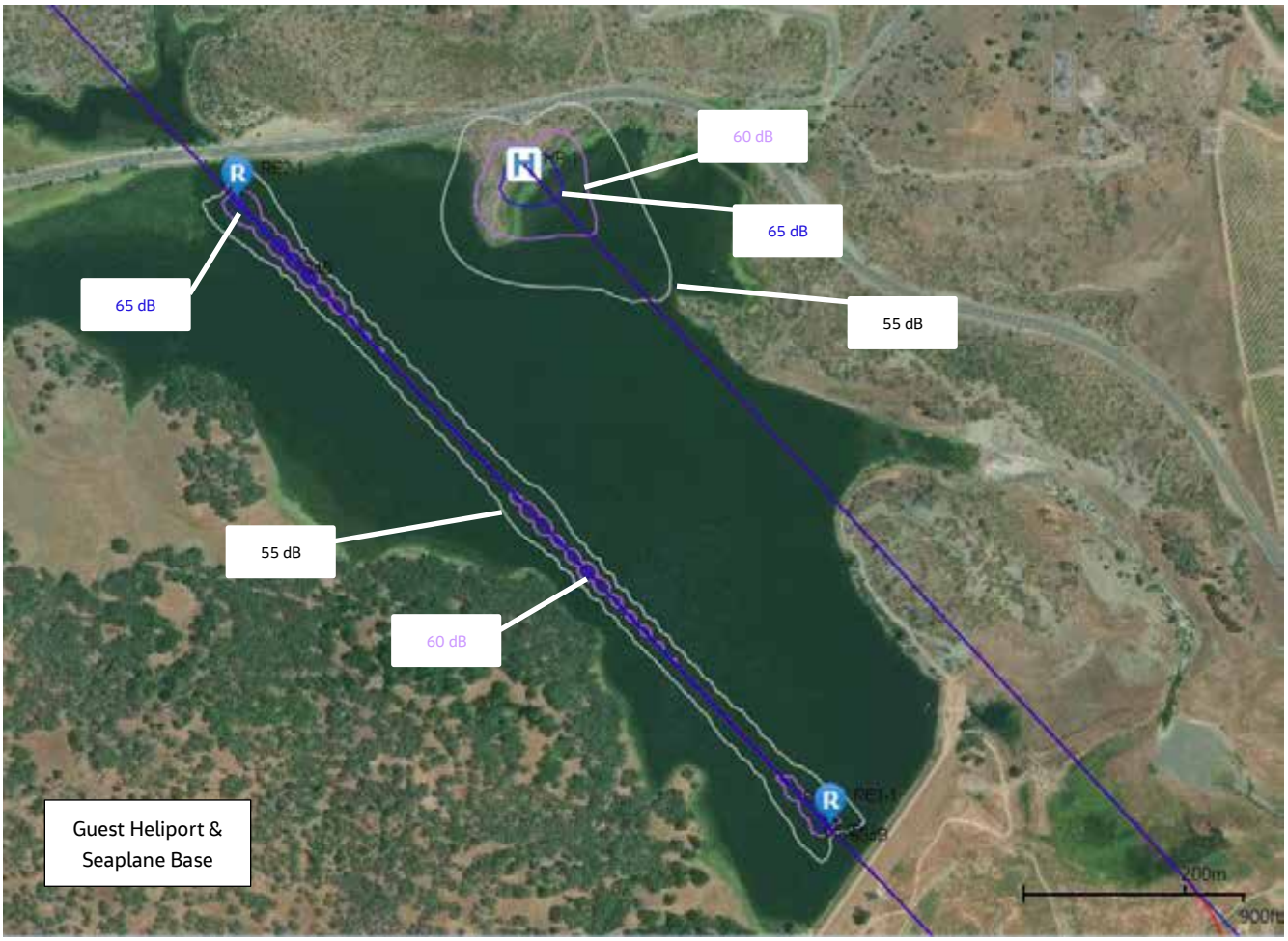
5.2 Anticipated Number of Operations

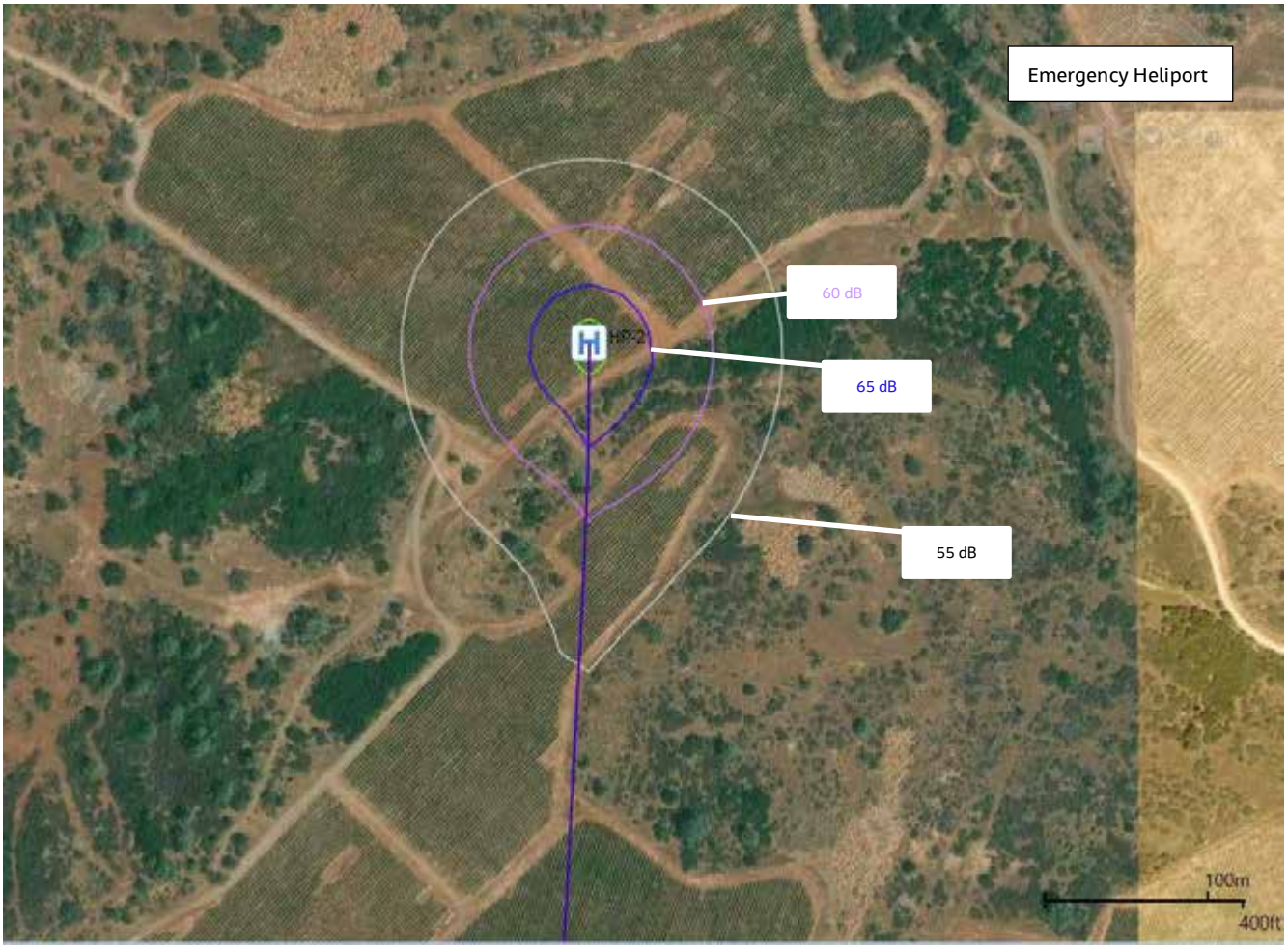
The anticipated number of operations modelled with AEDT as well as the aircraft types used is summarized below. Two operations a day (one arrival and one departure) were modelled for the Emergency Response Center Heliport, as well as two operations a day for each runway configurations of the seaplane base (one landing and one take off in each direction) and four operations at the Detert Reservoir Heliport (two take offs and landings). All the operations were assumed to occur during day time between 7:00am and 7:00pm (Pacific Daylight Time). This scenario was selected as a conservative one compared to the anticipated number of operations, especially for the Emergency response center which is not anticipated to be used every day. The Bell UH-1 Iroquois was used to model emergency operations in lieu of the UH-1H Super Huey Helicopters; this is not anticipated to have major impacts on the results.

	Emergency Heliport #1	Reservoir Heliport #2	Seaplane Base
Airframe	Bell UH-1 Iroquois	Sikorsky S-76 Spirit	Cessna 208 Caravan
Engine	T400	T70070	PT6A42
Daily Number of Operations	2 Daytime Operations (One arrival and One Departure)	4 Daytime Operations (Two Arrivals and Two Departures)	4 Daytime Operations (Two Arrivals and Two Departures on each runway end)

5.3 Noise Contours

The noise contours were modelled using the Community Noise Equivalent Level (CNEL) metric with a receptor grid spaced 0.01 nautical miles. The contours are depicted below. Because of the activity level anticipated, the noise contours are restricted to the immediate vicinity of the heliports and the seaplane base and do not extend to the communities in the vicinity of the Guenoc Ranch.





The following table summarizes each noise contour length and area, combined over the three sites.

	Metric	Shape Length (feet)	Shape Area (acres)
55	CNEL	45779.04	37.75
60	CNEL	26118.25	11.35
65	CNEL	9337.10	2.58
70	CNEL	1715.09	0.20

Appendix A. Aviation Environmental Design Tool (AEDT) Data

aedt_study_input_report
Study Input Report

Study Information

Report Date:	5/17/2020 3:47:17 PM
Study Name:	MahaFarms
Description:	Maha Farms Seaplane and Heliports
Study Type:	NoiseAndEmissions
Mass Units:	Kilograms
Use Metric Units:	No

Study Database Information

Study Database Version: 1.54.2

Airport Layouts

Layout Name:	Layout
Airport Name:	MAHAFARMS
Airport Codes:	KMAH
Airport Description:	
Country:	US
State:	CA
City:	
Latitude:	38.729019 degrees
Longitude:	-122.599167 degrees
Elevation:	1038 feet
Runway:	RE1-1/RE2-1
Length:	3565 feet
Width:	150 feet
Runway End:	RE1-1
Latitude:	38.725431 degrees
Longitude:	-122.524722 degrees
Threshold Elevation:	n/a
Approach Displaced Threshold:	0 feet
Departure Displaced Threshold:	0 feet
Crossing Height:	50 feet
Glide Slope:	3 deg
Effective Date:	5/13/2020
Expiration Date:	5/13/2050
Percent Wind:	0%
Runway End:	RE2-1
Latitude:	38.732525 degrees
Longitude:	-122.533333 degrees

```
      Threshold Elevation:             n/a
      Approach Displaced Threshold:    0 feet
      Departure Displaced Threshold:   0 feet
      Crossing Height:                 50 feet
      Glide Slope:                     3 deg
      Effective Date:                  5/13/2020
      Expiration Date:                 5/13/2050
      Percent Wind:                    0%
   Runway:              HP-1
      Length:           0 feet
      Width:            0 feet
      Runway End:       HP-1
        Latitude:                        38.732936 degrees
        Longitude:                     -122.529167 degrees
        Threshold Elevation:           n/a
        Approach Displaced Threshold:  n/a
        Departure Displaced Threshold: n/a
        Crossing Height:               n/a
        Glide Slope:                   n/a
        Effective Date:                5/13/2020
        Expiration Date:               5/13/2050
        Percent Wind:                  0%
   Runway:              HP-2
      Length:           0 feet
      Width:            0 feet
      Runway End:       HP-2
        Latitude:                        38.747203 degrees
        Longitude:                     -122.448333 degrees
        Threshold Elevation:           n/a
        Approach Displaced Threshold:  n/a
        Departure Displaced Threshold: n/a
        Crossing Height:               n/a
        Glide Slope:                   n/a
        Effective Date:                5/13/2020
        Expiration Date:               5/13/2050
        Percent Wind:                  0%


-------------------------------------------------------------------------------
Receptor Sets
-------------------------------------------------------------------------------
      Receptor Set:     Default
         Description:   Default
         Type:          Receptor
         Number of receptors: 4000000
         Longitude:     -122.705534 degrees
         Latitude:      38.645555 degrees
         X Count:       2000
         Y Count:       2000
```

X Spacing: 0.01
Y Spacing: 0.01

Annualizations

Annualization: Allac
Description: Allac
Start Time: Thursday, May 14, 2020
Duration: 1.00:00:00
Air Performance Model: SAE_1845_APM
Altitude Cutoff: 10000
Fuel Sulfur Content: 0.0006
Sulfur Conversion Rate: 0.024
Taxi Model: UserTaxiModel
Use Bank Angle: True
Airport Layouts: Layout
Annualizations:
Allac
Op group: Allac
Description: Allac
Source Type: SourceAircraft
Start Time: 5/14/2020 12:00:00 AM
Duration: 1.00:00:00
Hourly Wx File:

Annualization: Allac

Op group Allac

Child Case: Allac

Description: Allac
Start time: 00:00:00
Duration: 01 days 00 hours
Number of Operations: 10

User-Defined Aircraft Profiles

User-Specified Aircraft Substitutions

Metric Results

```
       Metric Result 13
       Metric Result Name:
       Metric Result Description:
       Metric: DNL
       Receptor Set: Default
          Run Start Time:  5/15/2020 3:54:16 PM
          Run End Time:  5/15/2020 3:58:56 PM
          Run Status:    Complete
          Run Options:   RunOptions_DNL
            Result Storage Options:
              Dispersion Results:  None
              Emissions Results:  Case
              Noise Results:  Case
            Modeling Options:
              Ambient:   False
              Ambient Screening:  False
              Analysis Year (VALE):
              Apply Delay & Sequencing Model On Taxi:  False
              Calculate Aircraft Engine Startup Emissions:  False
              Calculate Speciated Organic Gases:  False
              Atmospheric Absorption:  2
              Delta Ambient:  0
              Do Fixed Ambient Threshold:  False
              Fill Terrain:  False
              Fixed Ambient Threshold:  0
              Lateral Attenuation:  ApplyLateralAttenuationToPropsAndHelos
              Noise Line Of Sight Blockage:  False
              Terrain:   False
              Terrain Fill In Value:
              Track Angle Checking:  False
              Type Of Ground:  Hard
              Do Spectral Cutoff:  False
              Time Audible Start Time:  5/15/2020 2:41 PM
              Time Audible Duration:  00:00
              Do Number Above Noise Level:  False
              Background Concentrations:  False
              Emissions Dispersion Output Options:  False
              Enhanced nvPM:  False
          Annualization:  Allac
       Metric Result 14
       Metric Result Name:
       Metric Result Description:
       Metric: CNEL
```

Receptor Set: Default
Run Start Time: 5/15/2020 3:59:40 PM
Run End Time: 5/15/2020 4:05:25 PM
Run Status: Complete
Run Options: RunOptions_CNEL
Result Storage Options:
Dispersion Results: None
Emissions Results: Case
Noise Results: None
Modeling Options:
Ambient: False
Ambient Screening: False
Analysis Year (VALE):
Apply Delay & Sequencing Model On Taxi: False
Calculate Aircraft Engine Startup Emissions: False
Calculate Speciated Organic Gases: False
Atmospheric Absorption: 0
Delta Ambient: 0
Do Fixed Ambient Threshold: False
Fill Terrain: False
Fixed Ambient Threshold: 0
Lateral Attenuation: ApplyLateralAttenuationToPropsAndHelos
Noise Line Of Sight Blockage: False
Terrain: False
Terrain Fill In Value:
Track Angle Checking: False
Type Of Ground: Hard
Do Spectral Cutoff: False
Time Audible Start Time: 5/15/2020 2:41 PM
Time Audible Duration: 00:00
Do Number Above Noise Level: False
Background Concentrations: False
Emissions Dispersion Output Options: False
Enhanced nvPM: False
Annualization: Allac

APPENDIX BOHN

UPPER BOHN LAKE RECREATION OPERATION PLAN

GUENOC VALLEY MIXED USE DEVELOPMENT

MAHA FARM UPPER BOHN LAKE RECREATION OPERATION PLAN

MAY 19, 2020

Upper Bohn Lake is one of several large agricultural irrigation reservoirs within the Guenoc Ranch. The reservoir straddles the boundary of Lake and Napa County and provides important riparian wildlife habitat in addition to irrigation water for nearby agricultural lands. The reservoir is an important scenic feature for the Guenoc Valley District (GVD) and particularly for the centerpiece of Maha Farms located on the west side of the reservoir, serving as a scenic and recreational amenity for the resort. While the lake itself is located in both Lake and Napa Counties, recreation amenities and access points to the lake will be limited to Lake County.

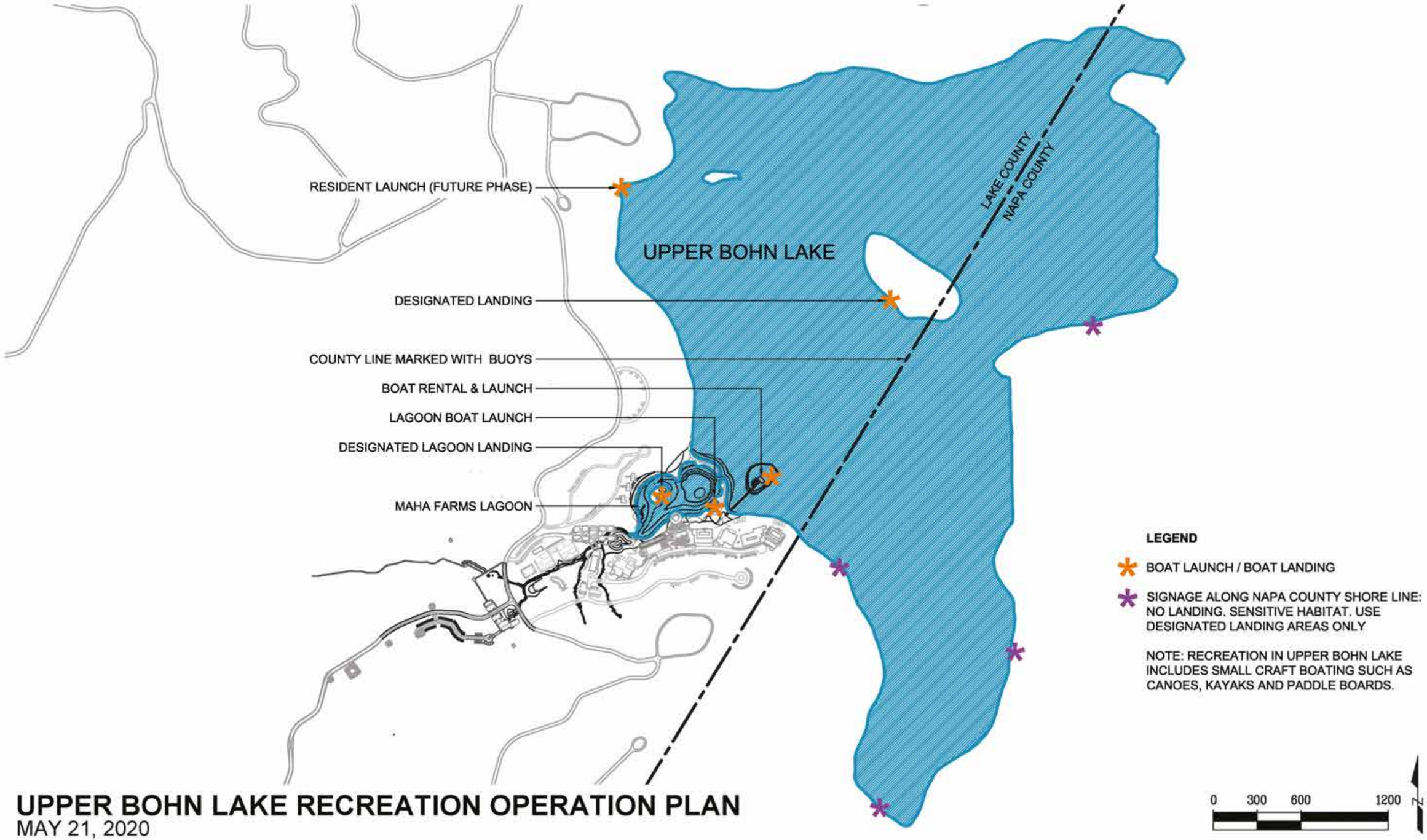
Guests and residents will have access to Upper Bohn Lake from Maha Farms. This access will be limited to kayaks, small rowboats and/or paddle boards launching from limited locations in Lake County. These locations include fixed or floating docks, beach access points, or similar:

- The main pier/dock which will include boat rental and launch facilities for a limited number of small watercraft located at the southwest corner of Upper Bohn Lake
- A small future swimming beach on the lagoon shoreline
- A small swimming beach near the Maha Farms Residents' Club on the Upper Bohn shoreline
- A future potential launch site along the northwest shoreline for residents

Landings will be limited and clearly marked (see Exhibit). Designated landings will be limited to Lake County.

Sensitive habitat areas along the shoreline will be clearly marked to prohibit any boat landing (See Exhibit). Signage will say "Sensitive Habitat, Use Designated Landing Areas only", or similar.

Pedestrian access along the shoreline will be from designated trails within Maha Farms which will be located above the winter high water level.



UPPER BOHN LAKE RECREATION OPERATION PLAN

MAY 21, 2020

APPENDIX TDM

TRANSPORTATION DEMAND MANAGEMENT PLAN

Guenoc Valley Mixed Use Development

Transportation Demand Management Plan

Confidential Administrative Draft

Prepared for:
Mahaman

May 27, 2020

SF19-1024

FEHR PEERS

This page intentionally left blank.

Transportation Demand Management (TDM) Plan

This report contains the Project's Transportation Demand Management (TDM) Plan. An overview of the TDM Plan and its goals is presented. Then, the 15 strategies that make up the Plan are described in detail and finally, a monitoring and reporting plan is presented.

1.1 Project Description

The Proposed Project consists of a master planned mixed-use resort and residential community within a portion of the 16,000-acre Guenoc Valley Ranch property in southeast Lake County and off-site workforce housing located on a 12.75-acre site in central Middletown. The Project sponsor proposes to develop a portion of the Project site into a luxury resort, consisting of hotels, retail and commercial uses, residential housing, and outdoor recreation amenities, including a golf course and equestrian facilities.

Access to the site would be provided via two entrance roadways extending from Butts Canyon Road. The primary access to the Guenoc Valley Site for residents and guests would occur via a new roadway and intersection. Both the new primary and existing secondary access intersections would include roadway improvements to enhance accessibility and safety for all road users. The Project sponsor will provide a weekday shuttle service for employees from the Middletown Housing Site to the Guenoc Valley Site, as well as an internal electric vehicle fleet for guests to travel around the site.

1.2 TDM Plan Overview

This TDM Plan has been developed to satisfy the requirements of Mitigation Measure 3.13-4 of the Draft Environmental Impact Report (DEIR) dated February 28, 2020, and includes a detailed monitoring and reporting component.

The Project sponsor is committed to implementing measures to reduce vehicle trips to and from the Project site and overall vehicle-miles travelled, as required by Mitigation Measure 3.13-4 in the DEIR. The Project has been designed to prioritize and promote non drive-alone trips to, from, and within the site for employees and guests, primarily through a robust shuttle program and workforce housing program.

The Project design is complemented and supported by the Project's TDM Plan, which includes specific strategies to reduce vehicular trip-making by shifting trips that would otherwise be made by private automobile to other modes such as private shuttle or public transit. This generally involves improving the appeal of these modes via supportive amenities (such as providing high-frequency and convenient shuttles

and real-time transit information screens), and reducing the need for site users to make many off-site trips that tend to be more likely made by automobile (by providing key amenities such as high quality restaurants and recreational activities, including swimming, spa, golf, and equestrian facilities within the Project site).

The strategies presented in this chapter constitute the initial plan for the first phase of development. The Project sponsor will evaluate the TDM Plan during further buildout. The Project sponsor would convene with Lake County and other key stakeholders to evaluate the effectiveness of the TDM strategies implemented to date. If the Project is found to be falling short of the TDM goals at a particular checkpoint, the Project sponsor will work with Lake County to consider adjustments to TDM strategies or new measures to achieve the goal.

1.3 Detailed Review of Each Strategy

The following details the 15 TDM strategies proposed as part of the Guenoc Valley Mixed Use Development.

1.3.1 Workforce Housing

Details:

Workforce housing will be provided by the Project for employees. It is anticipated that the employees for the operation of the Project would primarily be from the local workforce. Due to the limited availability of rental homes and housing stock options near the Guenoc Valley Site, the Project includes a mixture of on- and off-site workforce housing for employees. The Project will provide up to 35 housing units on-site and up to 50 housing units off-site in nearby Middleton for a total of 85 workforce housing units and 321 total bedrooms for employees.

By providing local, convenient workforce housing, the Project is providing housing options that limit the commute distance for employees, reducing vehicle miles traveled (VMT) and lowering the need for employees to drive to work. Further, by providing the off-site workforce housing in one central location, the Project is able to provide a private employee shuttle, as further described in TDM measure 1.3.3 below.

Target Audience:

Employees

1.3.2 Limited Parking Supply

Details:

The Project has developed site-specific parking requirements in coordination with the County due to the large-scale development and unique land use combination. These Project-specific parking rates are

DRAFT

substantially lower than the County's typical parking requirements which will encourage non-auto modes, especially for employees. The Project is providing limited parking on-site for employee back of house operations, but will provide additional park-and-ride spaces near the off-site workforce housing to encourage use of the private employee shuttle service.

Target Audience:

Employees

1.3.3 Private Shuttle Service

Details:

There are currently no plans for Lake Transit to run buses along Butts Canyon Road near the Project site and the nearest bus stops are about six miles away in Middletown. While it is possible Lake Transit might consider adding a stop on Butts Canyon Road in the future to serve employees, there are no plans to do so at this time. Alternatively, the Project will provide a frequent direct weekday shuttle service specifically for employees during the peak morning and evening commute periods. This shuttle will operate between the Project site and off-site workforce housing with a stop at the Lake Transit bus transfer point in Middletown. Shuttles will be fully accessible to passengers using wheelchairs. The Project sponsor will also explore providing a real-time smart-phone app that tracks arrivals to make shuttle use more reliable and convenient.

In addition to employee shuttle service, private shuttle service for patrons of the Project has been assumed as part of the EIR analysis. The Project sponsor will provide regular private shuttle service to and from San Francisco and Sacramento, which is expected to accommodate approximately 40% of resort patrons.

The management shall monitor and provide adequate shuttle headways to accommodate all employees and guests who wish to use the shuttle services.

Target Audience:

Employees and Guests

1.3.4 Carpool and Ride-Matching Assistance Program

Details:

Although on-site employee parking is limited, the management will offer personalized ride-matching assistance for those who do drive to pair employees interested in forming commute carpools. This service may also apply to employees commuting to the off-site park and ride lot where they catch the employee shuttle. As an enhancement, management may consider using specific services such as ZimRide, TwoGo by SAP, Enterprise RideShare, 511.org RideShare or the equivalent to help facilitate ride-matching.

DRAFT

Target Audience:

Employees

1.3.5 Preferential Parking for Carpoolers/Vanpoolers

Details:

The management will provide preferential carpool/vanpool parking for eligible commuters. To be eligible for carpool/vanpool parking, the carpool/vanpool shall consist of three or more people. The number of preferential parking spaces will be based on the number of participants in the program. The management shall monitor and provide adequate carpool/vanpool spaces to meet or exceed potential demand.

Target Audience:

Employees

1.3.6 Dedicated Parking Spaces for Car Share Services

Details:

The management will set aside parking spaces to be dedicated for use by car share services to serve employees. This is expected to reduce parking demand and GHG emissions associated with the Project by providing more flexibility for employees who otherwise utilize alternate modes. Car share services allow for employees to make midday trips without needing to have their own personal vehicle on site. The availability of car share services within a project can potentially reduce the demand for employees to commute by car or even own their own cars.

In addition to dedicating parking spaces for car share services for employees, the management may consider dedicating additional parking spaces for car share vehicles dedicated for guest use, if demand exists. The availability of such cars makes traveling to the Project site without a personal vehicle more appealing for some guests

The management shall monitor and provide adequate car share spaces to meet or exceed potential demand.

Target Audience:

Employees and Guests

DRAFT

1.3.7 On-site Sales of Transit Passes

Details:

The building management will offer direct on-site sales of Lake Transit Authority transit passes purchased and sold at a bulk group rate to employees. Although Lake Transit Authority does not currently operate transit service to the site directly, some employees who live in the greater Lake County and surrounding areas may take public transit to Middletown and then could take the private shuttle to the Project site. Offering on-site transit pass sales reduces the barrier of purchasing transit passes and provides a bulk discount to employees, further encouraging transit use as a primary commute mode.

Target Audience:

Employees

1.3.8 TDM Coordinator

Details:

Management will designate a "TDM coordinator" to coordinate, monitor and publicize TDM activities. The effectiveness of providing a TDM Coordinator on auto mode share is uncertain but is generally seen as a supportive measure that is beneficial to implement the other TDM measures. The Project sponsor may instruct the management company to designate their on-site manager as the TDM coordinator, or they may designate someone else.

Target Audience:

N/A

1.3.9 Transportation and Commute Information Kiosks

Details:

An information board or kiosk will be located in a common gathering area (e.g., lobby, employee entrance, break, or lunch room). The kiosk will contain transportation information, such as Emergency Ride Home (ERH), transit schedules, bike maps, and 511 ride-matching. Information will be updated as necessary by the designated TDM Coordinator.

Target Audience:

Employees

DRAFT

1.3.10 Tenant Performance and Lease Language – TDM Requirements

Details:

For all tenants, the Project sponsor will draft lease language or side agreements that require the identification of a designated contact responsible for compliance and implementation of the TDM program.

Target Audience:

Tenants

1.3.11 Tenant/Employer Commute Program Training

Details:

As needed and applicable, the Project sponsor or property management will provide individual tenants of the Project with initial TDM (and commute) program training, and commute program start-up assistance. The overarching goals of this support function are to reduce commute trips for employees and assist with employee marketing and outreach.

Target Audience:

Tenants

1.3.12 Employee Transportation Brochure

Details:

All employees will be provided with an Employee Transportation Brochure regarding the Commute Program. This brochure will include (but not be limited to) information about shuttle service, carpool parking, car share service, transit opportunities, ride-matching services, bicycle routes, and emergency rides home.

Target Audience:

Employees

1.3.13 On-site Bicycle Parking and Storage

Details:

Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in the commercial portion of the Project. Both short-term and long-term secure bicycle parking will be provided. Short-term

DRAFT

parking will be targeted towards guests at commercial buildings and shall be located near main building entrances. Long-term parking will be targeted towards employees and shall be covered and secured in a way that prevents damage from the elements and minimizes the risk of theft. Bicycle parking shall be provided at a minimum rate of one space per 15 vehicle parking spaces. Phase 1 of the Project includes 753 vehicle parking spaces which correlates to a minimum requirement of 50 bicycle parking spaces. The management shall monitor and provide adequate bicycle parking spaces to meet or exceed potential demand.

Target Audience:

Employees and Guests

1.3.14 Provide Off-Road Bicycle Trails

Details:

A non-vehicular circulation system will be developed as part of the Project to connect all development areas and natural destinations. Off-road trails will be developed for use with hiking, horseback, and mountain bike riding. Off-road trails for bicycles and other non-auto modes provide additional opportunities for employees and guests to circulate around the site without the need for a private vehicle.

Target Audience:

Guests and Employees

1.3.15 Implement Electric Fleet for Internal Transport

Details:

The Project sponsor will implement the use of an electric fleet of vehicles for internal transport to the extent feasible (no less than 75 percent), including the golf course. This fleet will be available on-demand for guests to access all land uses on the site without the need for a personal vehicle (e.g. a guest could call a car from the concierge to take them from a their hotel to a restaurant or spa). This measure will help to reduce overall VMT and vehicle trips. The management shall monitor and provide an adequate fleet size to meet or exceed potential demand.

Target Audience:

Guests

DRAFT

1.4 Monitoring and Reporting

The Project sponsor has committed to undertake annual monitoring and reporting of the TDM Plan to assess the effectiveness of the Plan.

The assigned TDM Coordinator will submit the first monitoring report 18 months after issuance of the first certificate of occupancy. After the first reporting period, reports will be submitted on an annual basis for the first five years, after which they may be submitted every three years for the next 12 years. The Project's TDM coordinator shall adjust the TDM plan based on the monitoring results and input from Lake County staff. Monitoring and reporting components and guidelines are summarized below:

***TDM Plan Monitoring and Reporting**: The TDM Coordinator shall collect data, prepare monitoring reports, and submit them to the County staff. The Project sponsor shall monitor daily one-way vehicle trips for the Project site, and shall compare these vehicle trips to the aggregate daily one-way vehicle trips anticipated based on the trip generation rates contained within the Project's DEIR.*

***Timing**. The TDM Coordinator shall collect monitoring data and shall begin submitting monitoring reports to Lake County 18 months after issuance of the first certificate of occupancy. Thereafter, annual monitoring reports shall be submitted for the first five years, and then once every three years for the next 12 years.*

***Term**. The Project sponsors shall monitor, submit monitoring reports, and make plan adjustments until the earlier of: (i) 18.5 years after the issuance of the first certificate of occupancy, (ii) the expiration of the Development Agreement, or (iii) the date Lake County staff determines that the reports are no longer necessary.*

***Components:** The monitoring and reporting, including trip counts, surveys and travel demand information, shall include the following components or comparable alternative methodology and components, as approved, accepted or provided by County staff:*

(1) Trip Count and Intercept Survey: Provide a site-wide trip count and intercept survey of persons and vehicles arriving and leaving the Project site for no less than two days during the reporting period between 6:00 a.m. and 8:00 p.m. One day shall be a Tuesday, Wednesday, or Thursday on which local schools are in session. Another day shall be a Saturday or Sunday during peak season. The trip count and intercept survey shall be prepared by a qualified transportation or survey consultant, and the County shall approve the methodology prior to the Project sponsor conducting the components of the trip count and intercept survey.

DRAFT

(2) Travel Demand Information: The above trip count and survey information shall be able to provide the travel demand analysis characteristics (work and non-work trip counts, origins and destinations of trips to/from the Project site, and modal split information).

(3) Documentation of Plan Implementation: The TDM coordinator shall work in conjunction with County staff to develop a survey (online or paper) that can be reasonably completed by the TDM coordinator and/or Transportation Management Association (TMA) staff members to document implementation of TDM program elements and other basic information during the reporting period. The Project sponsor shall include this survey in the monitoring report submitted.

***TDM Plan Adjustments**. The Project sponsor shall adjust the TDM plan based on the monitoring results if they demonstrate that measures in the TDM plan are not achieving the reduction goal. The TDM plan adjustments shall be made in consultation with County staff and may require refinements to existing measures, inclusion of new measures, or removal of existing measures (e.g., measures shown to be ineffective or induce vehicle trips).*

DRAFT

APPENDIX WILDLIFE

A SYSTEMATIC REVIEW OF HABITAT CONNECTIVITY AS PROPOSED IN THE GUENOC VALLEY MIXED USE PROJECT IN RELATION TO IN THE MAYACAMAS TO BERRYESSA (M2B) CONNECTIVITY NETWORK REPORT (M2B 2018)

A

review of habitat connectivity as proposed in the Guenoc Valley Mixed Use Project in relation to the *Mayacamas to Berryessa (M2B) Connectivity Network Report* (M2B 2018) in response to public comments on Draft Environmental Impact Report

Guenoc Valley Mixed Use Project June 1, 2020

Prepared by Palisades Land Use Consultancy, SWA Group and WRA, Inc.

TABLE OF CONTENTS

TABLE OF CONTENTS 3
LIST OF TABLES & FIGURES 4
LIST OF ACRONYMS & DEFINITIONS 5
CONTRIBUTORS 6
1 | EXECUTIVE SUMMARY 7
2 | HISTORY & ENTITLED USES OF GUENOC RANCH 9
2.1 | EXISTING LANDSCAPE CONDITIONS 9
2.2 | SURFACE WATER RIGHTS & VINEYARDS 10
2.3 | DESIGNATED OPEN SPACE 11
3 | PROJECT DESIGN FEATURES 12
3.1 | LOW DENSITY RESIDENTIAL 12
3.2 | CLUSTERED COMMERCIAL DEVELOPMENT 13
3.3 | LANDSCAPE PLAN 13
3.4 | RIPARIAN HABITAT PROTECTION & ENHANCEMENT 14
3.5 | OAK WOODLAND PRESERVATION 16
3.6 | RURAL LANDSCAPES 17
4 | HABITAT & CONNECTIVITY ASSESSMENT 18
4.1 | ASSESSMENT OF HABITAT CONNECTIVITY WITH M2B STUDY 18
4.2 | M2B FOCAL AREA APPLICABLE TO PROJECT LOCATION 19
4.3 | M2B IDENTIFIED RIPARIAN CORRIDORS 20
4.4 | M2B IDENTIFIED TERRESTRIAL CORRIDORS 21
4.5 | POTENTIAL CONSTRAINTS 22
5 | APPLICANT SPONSORED HABITAT CONNECTIVITY MEASURES 23
5.1 | PROPOSED WILDLIFE PATHS 24
5.2 | DESIGNATED OPEN SPACE PROTECTION 25
5.3 | HABITAT CONNECTIVITY EASEMENTS 26
5.4 | HABITAT CONNECTIVITY EASEMENTS IN RESIDENTIAL PARCELS 28
5.6 | SUMMARY OF PROJECT SPONSORED HABITAT CONNECTIVITY MEASURES 30
5.7 | ALTERNATIVE VINEYARD DEVELOPMENT SCENARIO 32
6 | IMPLEMENTATION 33
6.1 | DESIGN GUIDELINES 33
6.2 | RECORDED RESTRICTIONS 33
6.3 | HOMEOWNERS ASSOCIATION 33
7 | REFERENCES 35

LIST OF TABLES & FIGURES

FIGURE 1: SURFACE WATER RIGHTS AREAS, EXISTING VINEYARDS, & POTENTIAL VINEYARDS 10
FIGURE 2: DESIGNATED OPEN SPACE 11
FIGURE 3: PROJECT LOW-IMPACT RESIDENTIAL DEVELOPMENT 12
FIGURE 4: PROJECT LANDSCAPE ZONES 14
FIGURE 5: RIPARIAN HABITAT PROTECTION & ENHANCEMENT 14
FIGURE 6: OAK WOODLAND PRESERVATION 16
FIGURE 7: GUENOC RANCH SITE AND HEART OF MAYACAMAS TO BERRYESSA FOCAL AREA 19
FIGURE 8: M2B-IDENTIFIED RIPARIAN LCPs & PROJECT SITE PLAN 20
FIGURE 9: EXISTING TERRESTRIAL CORRIDORS & PHASE 1 PROJECT SITE PLAN 21
FIGURE 10: PROPOSED WILDLIFE PATHS 24
FIGURE 11: PATH PROTECTION IN DESIGNATED OPEN SPACE 25
FIGURE 12: PATH PROTECTION IN HABITAT CONNECTIVITY EASEMENTS 26
FIGURE 13: PATH PROTECTION IN RESIDENTIAL HABITAT CONNECTIVITY EASEMENTS 28
FIGURE 14: RESIDENTIAL HABITAT CONNECTIVITY EASEMENT AREA FENCING OPTIONS 29
FIGURE 15: GUENOC VALLEY MIXED USE PROJECT HABITAT CONNECTIVITY MEASURES 31
FIGURE 16: CONSTRAINED M2B PATHS IN VINEYARD DEVELOPMENT SCENARIO 32

LIST OF ACRONYMS & DEFINITIONS

CC&R	Covenants, Conditions, & Restrictions
CEQA	California Environmental Quality Act
GVD	Guenoc Valley District
HOA	Homeowner's Association
LCP	Least Cost Path
M2B	Mayacamas to Berryessa (M2B) Connectivity Network Report
OWHM	Ordinary High Water Mark
POU	Place-of-Use for surface water rights
SSC	Species of Special Concern
TOB	Top of Bank

CONTRIBUTORS

Land Use Planning and Development Consultants

Kirsty Shelton, Entitlement Manager Maha Resorts/Principal and Planner, Palisades Land Use Consultancy
Rachel Lenihan, Project Manager/Associate Planner, Palisades Land Use Consultancy

Landscape Architecture & Planning
SWA

Joe Runco, Principal
Alison Ecker, Designer/Planner

Biological Consultation
WRA

Matt Richmond, Associate Principal
Brian Freiermuth, Wildlife Biologist
Michael Rochelle, GIS Analyst

1 | EXECUTIVE SUMMARY

This document provides a review of the Guenoc Valley Mixed Use Project's proposed habitat connectivity in relation to the Mayacamas to Berryessa (M2B) Connectivity Network Report (M2B 2018, enclosed for reference). The Guenoc Valley Mixed Use Project (the "Project") is a request for a General Plan Amendment, Specific Plan of Development[1] and related entitlements submitted to the County of Lake ("County"). The County prepared a Draft Environmental Impact Report ("DEIR) for the Project, which it released for public review and comment in February 2020. The Project described below is for the first phase of development; a review of habitat connectivity during future phases of development will be guided by the framework established here and subsequent environmental analysis.

The Project proposes a low-density mixed-use development integrated into the existing rural landscape. The Project request includes five subdivision maps consisting of 401 residential lots and 268 hotel units. The Project is located on portions of the 16,000-acre Guenoc Ranch ("Ranch") in Lake County, which currently includes a 75 mile network of existing ranch roads and 990 acres of already planted vineyards with a previously permitted entitlement to irrigate an additional 2,620 acres of land, including for vineyards. These extensive agricultural irrigation activities, which were the subject of a 2009 EIR with the State Water Resources Control Board ("2009 Water Rights EIR"), are served by a series of 19 reservoirs, six jurisdictional dams, and a surface water right to store and irrigate approximately 10,000 acre-feet of water.

As designed, the Project proposes a footprint of 1,415 acres, which replaces approximately 130 acres of currently planted vineyards; 270 acres of previously approved areas for agricultural irrigation, including vineyards; and approximately 1,105 acres of grazing pastures and rural landscape. The Project is designed to protect and enhance the site's grassy hillsides, oak woodlands, lakes, and streams as an essential defining aspect of the site. A key design component of the Project is an ultra-luxury experience with a very low development density, an average of 1 residence per 5 acres, and with each lot limited to no more than a 1.5 acre of buildable area. Impacts to streams, wetlands, and water bodies have been minimized through avoidance and setbacks. In addition, the site includes 2,765 acres of Designated Open Space and the Project preserves a total of approximately 1,965 acres of existing oak woodlands. These efforts result in a Project that prioritizes the native landscape and promotes habitat connectivity.

The County received certain public comments on the DEIR which raise questions regarding the Project's potential impacts on wildlife movement corridors and habitat connectivity. *See, e.g.,* Sierra Club Lake Group (April 20, 2020); Center for Biological Diversity (April 21, 2020); Redbud Audubon Society, Inc. (April 21, 2020). Many of these comments specifically address the consistency of the Project with the wildlife movement corridors identified in the M2B model.

This report reviews the M2B model of identified least cost paths ("M2B Paths") for wildlife movement along riparian (water-based) and terrestrial (land-based) corridors to assist the County in responding to public comments on the DEIR. The review demonstrates that the existing vineyards and areas already permitted for uses such as vineyards or other irrigable uses could impede wildlife movement on multiple sections of the M2B riparian & terrestrial pathways. By contrast, the Project accommodates all of the M2B Paths through a low-

[1] Guenoc Valley mixed-use project on file with the County of Lake

density design approach and a series of applicant-sponsored habitat connectivity Measures ("Measures," identified in Section 5) that remove the existing/permitted connectivity impediments. Thus, the Project represents a net benefit to habitat connectivity and an improvement over the existing vineyard entitlements for the property.

The Measures are intended to provide long-term habitat connectivity improvements and protection to the existing M2B Paths as well as the Proposed Wildlife Paths ("Proposed Paths") identified by the Project; the Proposed Paths will provide equivalent wildlife passage in close proximity to the M2B paths. Overall the Measures include the following:

- Ensuring a significant portion of the M2B Paths and Proposed Paths are long-term protected in the Project's 2,765 acre **Designated Open Space**;
- Establishing **Habitat Connectivity Easements** to facilitate key wildlife passages routes along M2B Paths and Proposed Paths throughout the Ranch's rural landscapes and Project development; these easements safeguard passage to a Protected Area Node identified in the M2B study, protect M2B paths along the Ranch boundary, and dedicate a primarily 300 foot wide easement through a series of residential parcels; and
- Allowing only **Wildlife Friendly Fencing** within the Habitat Connectivity Easements in order to facilitate wildlife movement.

Together, the 2,765 acres of Designated Open Space and over 400 acres of habitat connectivity easements offer approximately 3,200 acres of protected habitat connectivity landscapes through the Ranch site. These Measures supplement the Project's broader framework of habitat protection described above, including a low-density site design; native landscaping; avoidance of and setback from riparian area; and approximately 1,965 acres of preserved oak woodlands. These efforts create a context which minimizes constraints to wildlife movement patterns throughout the Ranch, avoids the creation of substantial barriers to landscape permeability, and maintains connectivity with protected habitats in the Ranch vicinity.

2 | HISTORY & ENTITLED USES OF GUENOC RANCH

The Guenoc Ranch is one of the largest unified landholdings in northern California. It was identified in the Middletown Area Plan as a key property for resort and residential development as an effort to revitalize the historic resorts of Lake County.

2.1 | EXISTING LANDSCAPE CONDITIONS

Guenoc Valley is a small inland valley set on an alluvial fan, isolated from surrounding areas by rocky ridges and volcanic rock. As part of the inner coastal range of Northern California, the site is characterized by uniquely varied topography and landscapes, with rolling hills, rocky cliffs, and oak woodlands. The Ranch has been grazed and farmed extensively for over 100 years and includes an extensive 75-mile road and pathway network.

2.2 | SURFACE WATER RIGHTS & VINEYARDS

The Ranch's water network includes a series of 19 reservoirs, six jurisdictional dams, and a system of above and below ground pipes and installed pumps. In 2009 the Guenoc Water Rights Modification Project Final Environmental Impact Report ("2009 FEIR," see AES, 2009), expanded the Place of Use (POU) for surface water right entitlements and increased the amount of water that could be impounded in the existing lakes. This surface water may be used for various uses, primarily agricultural irrigation.

The 2009 FEIR designated areas to use surface water for the above listed uses within approximately 2,620 acres of Approved Mitigated POUs within the Ranch site. These Mitigated POU areas were defined by a series of mitigation-based reductions from the Existing and Previously Proposed POU areas, as defined in the 2009 FEIR. 2,400 acres within Mitigated POUs are currently or have been recently leased for the primary purpose of vineyard development; of this area, 630 acres are currently planted vineyards and 1,770 acres remain unplanted. The current lessee controls the timing of vineyard development within these areas.

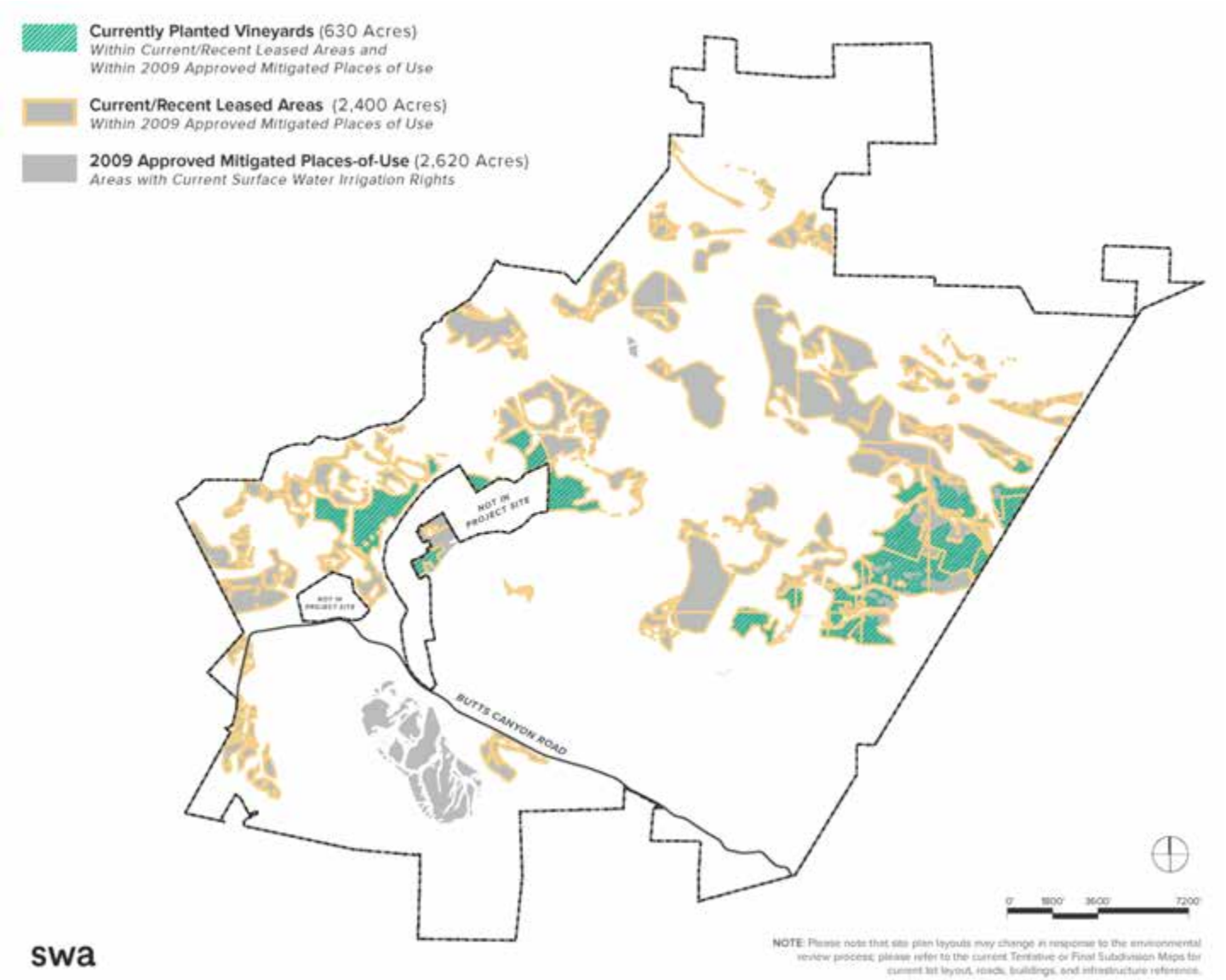


FIGURE 1: SURFACE WATER RIGHTS AREAS & EXISTING VINEYARDS

2.3 | DESIGNATED OPEN SPACE

The 2008 DEIR originally proposed a 5,028 acres area for "Proposed Place of Use" ("POU"s); after the mitigation-based reductions described above, the Proposed POU areas were reduced by 2,263 acres and resulted in an entitled area of 2,765 acres for surface water rights irrigation in the 2009 FEIR. The 2008 FEIR required a 1 to 1 mitigation measure to preserve an equal land area within an open space area to be permanently restricted (AES, 2009).

The site fulfills the 2009 FEIR mitigation measure by permanently preserving and protecting 2,765 acres of habitat in a centralized area referred to as the Designated Open Space. This area spans from the far northern to the far southern edge of the Project site. The Designated Open Space predominately protects the Bucksnort Creek riparian corridor as well as wilderness hillsides along the southeastern portion of the Project. Please see this document for further information. See **Figure 2** for the area currently defined as the Designated Open Space.

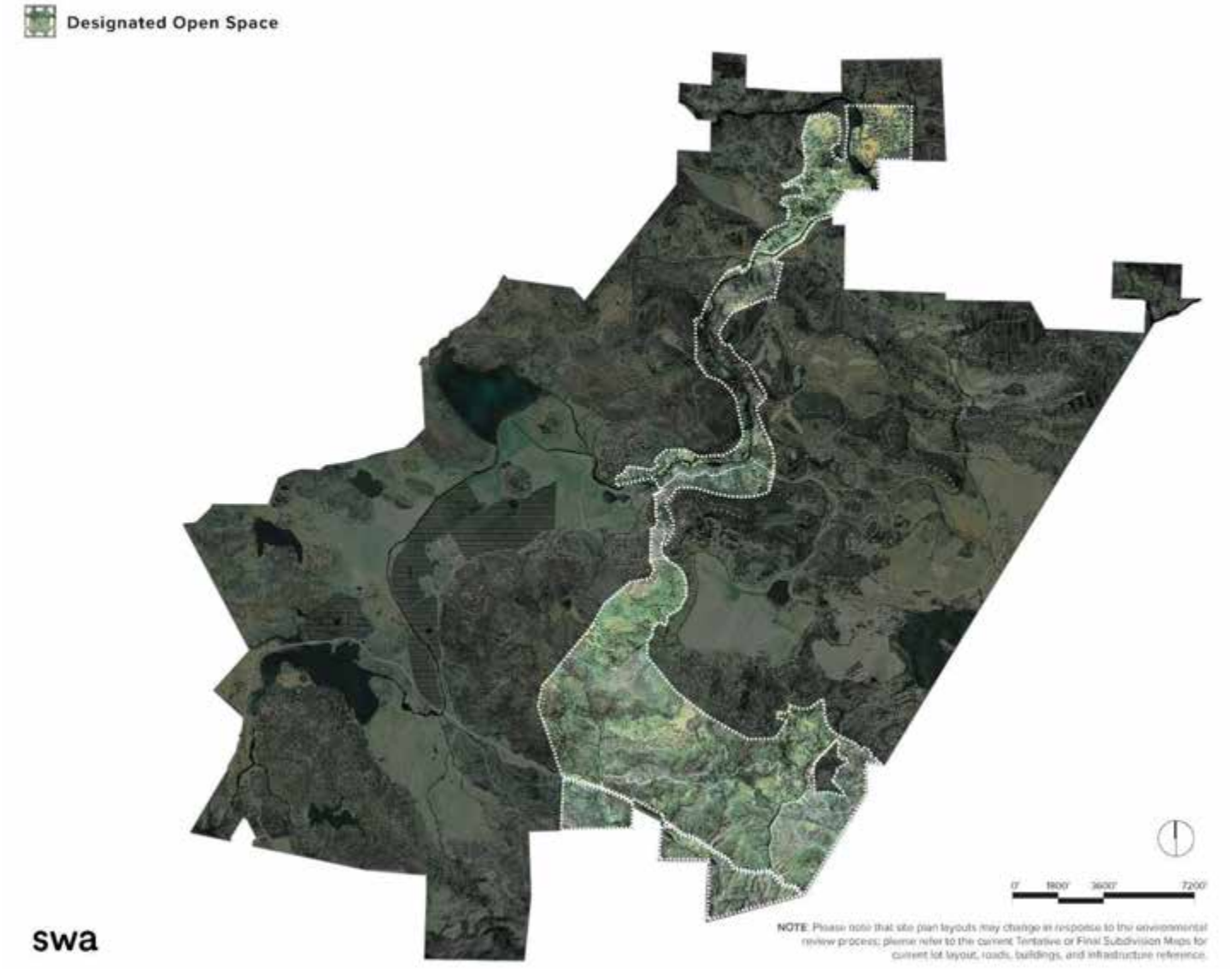


FIGURE 2: DESIGNATED OPEN SPACE

3 | PROJECT DESIGN FEATURES

3.1 | LOW DENSITY RESIDENTIAL

The Project proposes a low density of residential development, with residential estate parcel owners restricted to a maximum 1.5 acre buildable area. As most of these parcels are quite large at an average area of 6.5 acres, this strategy results in a substantial portion of these parcels remaining undeveloped. Specifically, the planned 401 residential estates spread over 2,048 acres of residential estate parcels will result in a low maximum impact at a density of 0.2 estates per acre. See **Figure 3**.

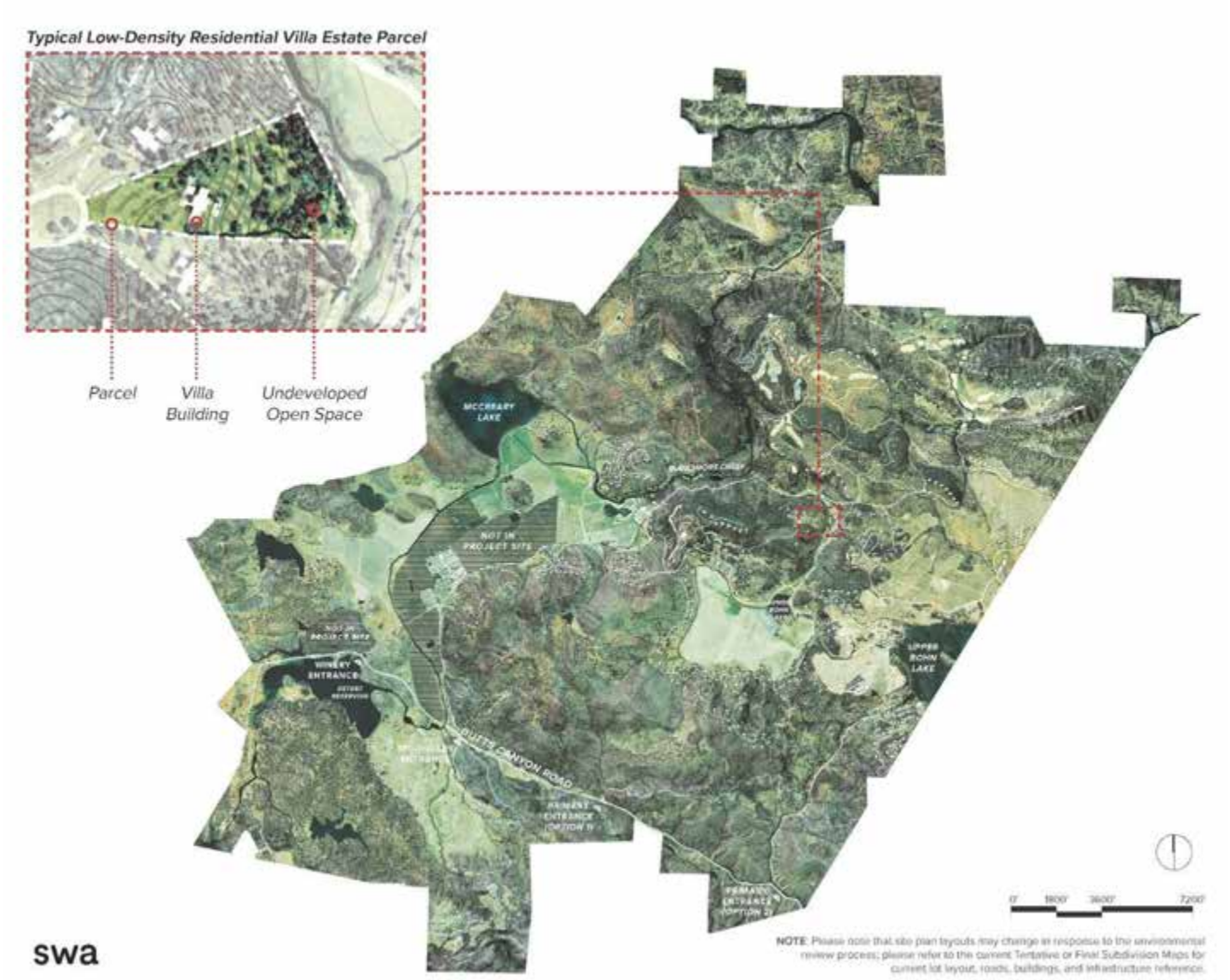


FIGURE 3: PROJECT LOW-IMPACT RESIDENTIAL DEVELOPMENT

3.2 | CLUSTERED DEVELOPMENT

The Project is designed around the concept of clustered development with a focus on protecting the rural landscape. This clustering approach results in a series of resort communities defined by a small, dense area of commercial and hotel uses surrounded by strategically placed residential estate villas. These clustered communities allow the areas outside of the Project extents to remain undeveloped in large sections throughout the Guenoc Ranch.

3.3 | LANDSCAPE PLAN

The residential, commercial, and roadway landscapes will be organized around a series of landscape zones which closely follow Guenoc Ranch's unique ecological character and microclimates. This includes zones which reflect Guenoc Ranch's natural and existing woodland, chaparral, grassland, vineyards, farming, and waterside character. Within these zones, typical landscape plans and recommended plant palettes will highly encourage the use of native plants that demonstrate a commitment to retaining and enhancing existing landscape patterns. Any landscape improvement will be approached with a 'light-touch,' strategy, in which existing landscapes will be supplemented by native and adaptive plants that enhance and complement the existing site character. See **Figure 4**.

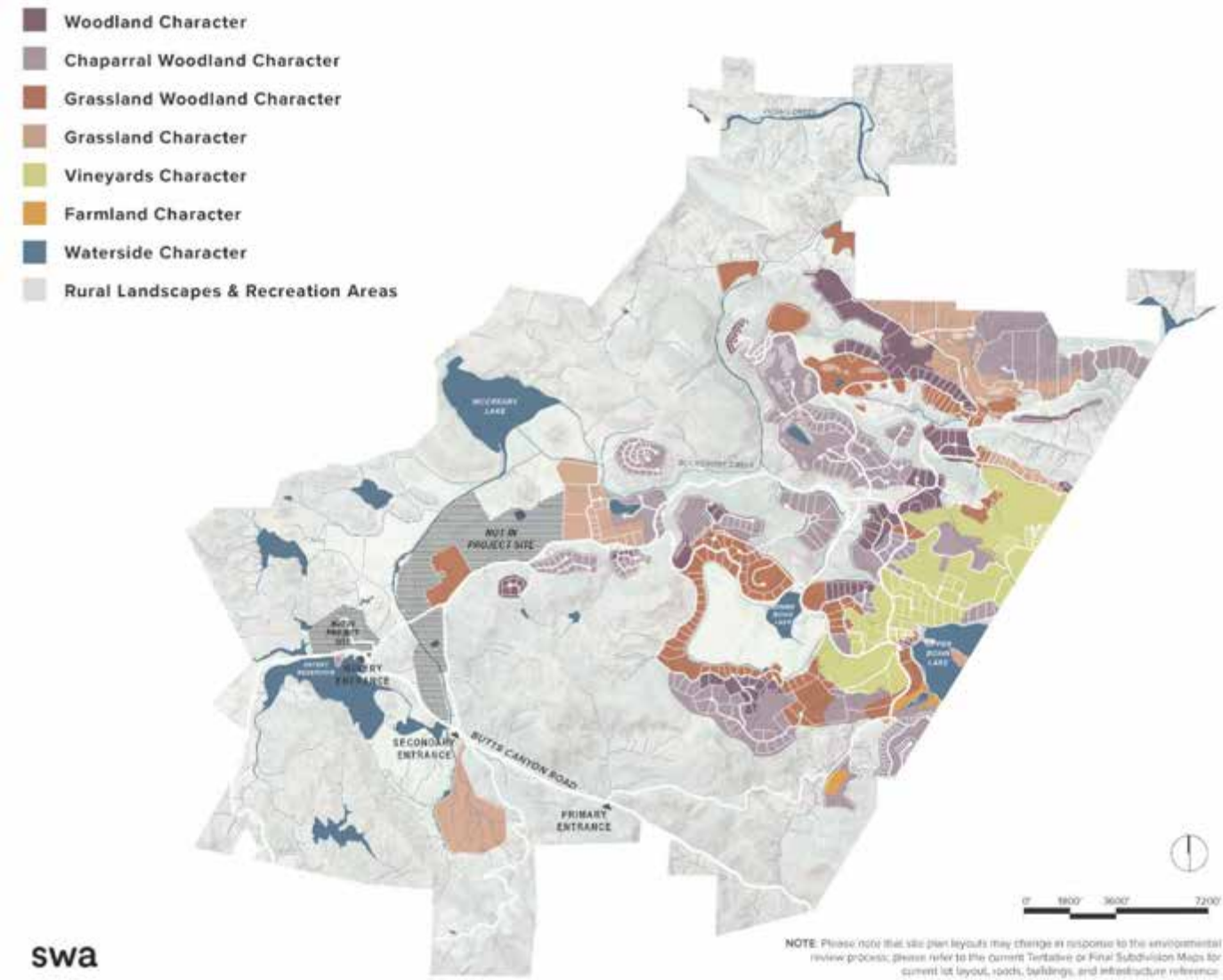


FIGURE 4: PROJECT LANDSCAPE ZONES

3.4 | RIPARIAN HABITAT PROTECTION & ENHANCEMENT

The Project is designed to avoid permanent impacts to riparian areas to the greatest extent possible. Work within riparian setbacks will be highly limited and will adhere to all jurisdictional requirements. This includes the following minimum setbacks:

- Ephemeral Streams/20' Setback from the Ordinary High Water Mark ("OHWM")
- Intermittent Streams/20' Setback from the Top of Bank ("TOB")
- Perennial Streams/30' Setback from TOB
- Open Water/20' Setback from OHWM
- Wetlands/20' Setback from OHWM

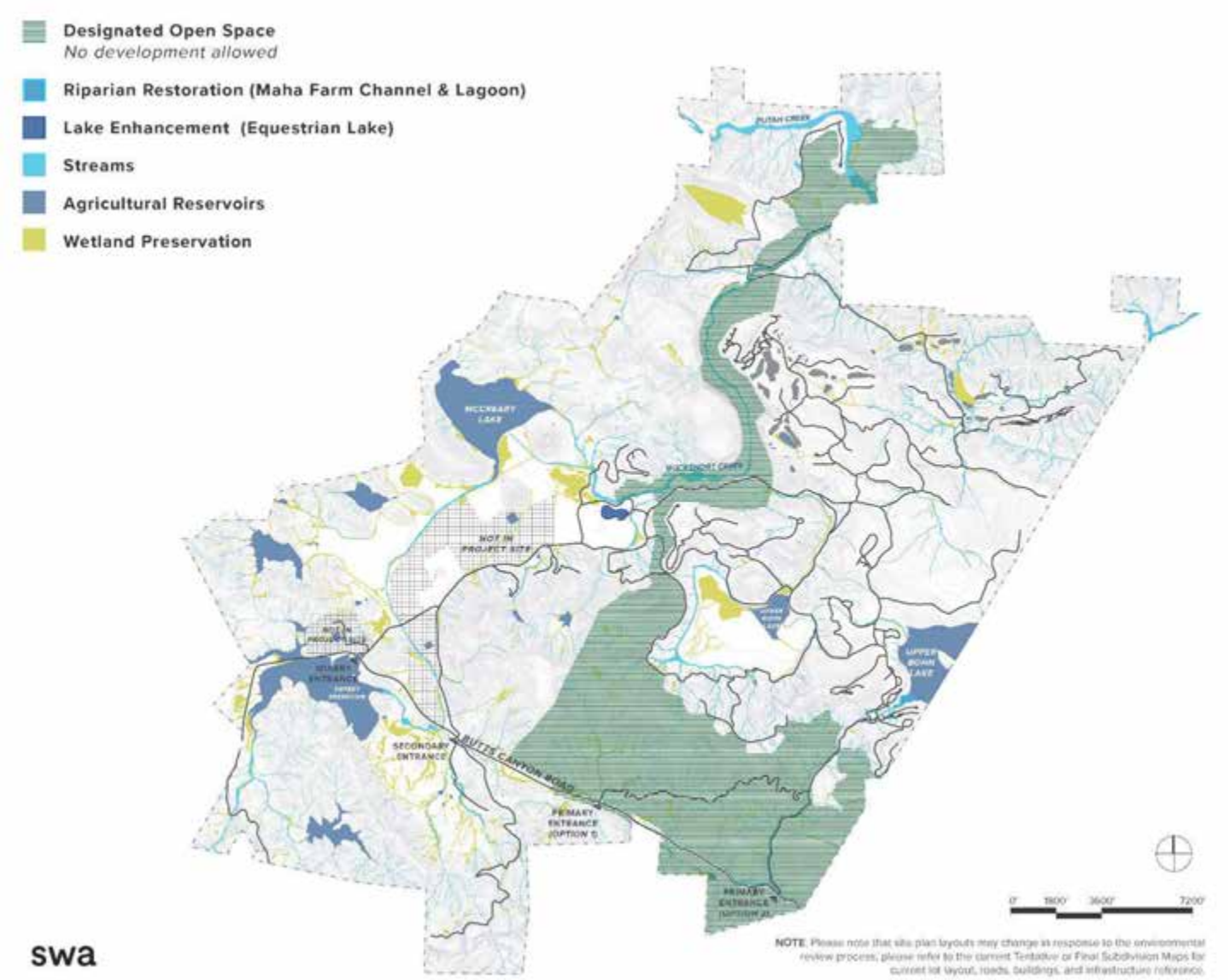


FIGURE 5: RIPARIAN HABITAT PROTECTION & ENHANCEMENT

In most cases, the setbacks maintained from streams, water bodies, and wetlands will far exceed these minimum requirements. In the few locations where riparian areas could be potentially impacted, usually by roads, these impacts are minimized through various measures. This includes designing bridges to free span streams to the greatest extent feasible in order to minimize aquatic barriers. In addition, permitting through the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the California Department of Fish and Wildlife will result in measures that minimize riparian habitat impact and the wildlife that depends on it. See **Figure 5**.

In two locations, riparian areas will be enhanced as part of an effort to both expand on-site habitat opportunities while also providing a visitor and resident amenity.

3.5 | OAK WOODLAND PRESERVATION

Approximately 1,965 acres of oak woodlands will be permanently protected in areas throughout the commercial, residential, and rural landscapes. These stands of Blue Oak Woodlands, Blue Oak Savanna, Valley Oak Woodlands, Interior Live Oak Woodlands, and Mixed Oak Woodlands are a defining feature of the Project site and are critical to the local habitat.

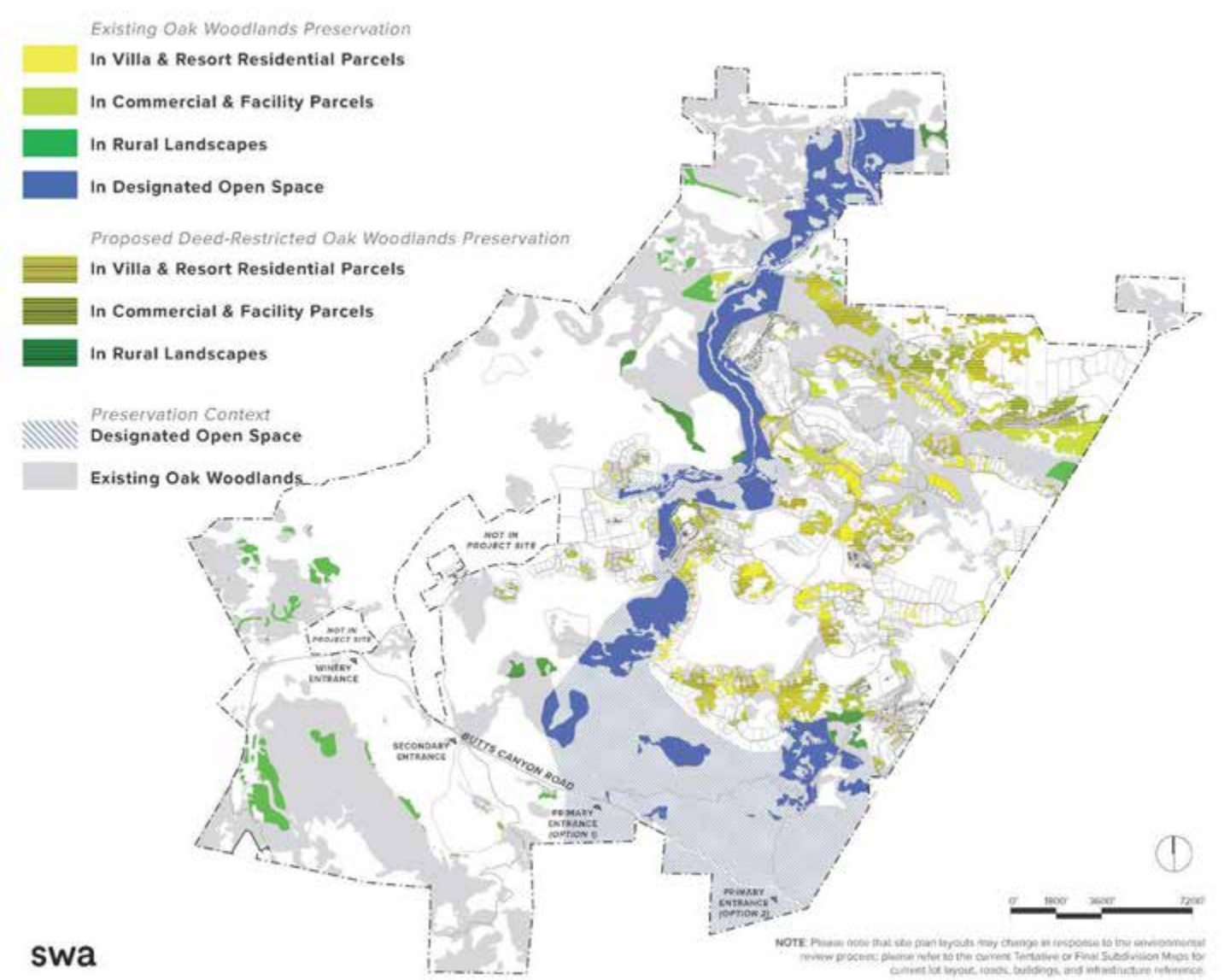


FIGURE 6: OAK WOODLAND PRESERVATION

The projected 1,965 acres of total oak woodland preservation are approximately divided between 579 acres in villa and resort residential landscapes, 255 acres in commercial and facility landscapes, 868 acres within the Designated Open Space, and 263 acres in rural landscapes. These preservation areas were partially defined to fulfill the existing preservation requirements from the 2009 FEIR. In addition, approximately 633 acres will also fulfill Project-sponsored preservation commitments to mitigate Project impacts at a ratio of 2 to 1 (for Blue Oak Woodlands, Blue Oak Savanna, Interior Live Oak Woodlands, and Mixed Oak Woodlands) and 3 to 1 (for Valley Oak Woodlands) (see "Proposed Oak Woodlands Preservation" in **Figure 6**); these ratio commitments define that for every acre of oak woodlands impacted, 2 or 3 acres will be preserved elsewhere on the Guenoc Ranch.

Oak woodland preservation within residential and commercial landscapes will be established through deed restrictions on the Final Recorded Map.

3.6 | RURAL LANDSCAPES

Finally, approximately 10,000 acres of the existing 16,000 acre ranch will be maintained in a native and rural state as part of the Project, with undeveloped land supporting existing vineyard and grazing operations; protected waterways and woodlands; and recreational hiking, biking, and horseback riding opportunities.

4 | HABITAT & CONNECTIVITY ASSESSMENT

4.1 | ASSESSMENT OF HABITAT CONNECTIVITY WITH M2B STUDY

The density of the development is very low and will incorporate native landscaping, and as such will not result in a patch deserts that would significantly alter the mosaic of habitat that insects or resident birds and bats would be likely to use for daily feeding and refuge. The Project will not impede the migration or movement of any special-status species that is dependent on habitat patches.

To assess wildlife movement and add to the existing body of information regarding connectivity in the region, this review utilizes outputs from the Mayacamas to Berryessa Connectivity Network (M2B 2018) Report, which used a GIS based analysis to develop a model ("M2B model") that identifies regionally important wildlife corridors between the most important protected habitat areas (referred to as "Protected Area Nodes") in the region. The M2B model used a least cost analysis to identify potentially important movement corridors and applied a permeability ranking to its subject area. The permeability of a corridor represents the degree of ease encountered by a species attempting to move through an area. Varying parameters either impede or encourage movement. The paths with the lowest total cost indicate the most likely movement routes and therefore determine the M2B-identified least cost paths ("M2B Paths") for the species to move between core areas. In addition to considering traditional parameters such as habitat, topography, and development, the M2B model also considers change in climate to maximize its capability to identify the most crucial areas for conservation. The M2B model outputs are necessarily coarse due to the large spatial scale that they assess. As a result, some barriers to wildlife movement were not incorporated as M2B model inputs. In the case of the Guenoc Ranch, the only significant barrier that we identified that was not included in the M2B model was vineyards and, specifically, wildlife exclusion fences surrounding vineyards

The M2B model produced separate analyses for terrestrial (land-based) and riparian (water-based) least cost paths and this review considers both types within the Guenoc Ranch. Once M2B Paths that were present in the site were identified, we focused on potential areas of constraint to determine if the Project would result in a substantial impact to these corridors. In the following sections we discuss the portion of the regional landscape where the Project is located, regionally significant protected habitat areas, and the terrestrial and riparian M2B Paths that are present and/or potentially impacted by the Project.

4.2 | M2B FOCAL AREA APPLICABLE TO PROJECT LOCATION

The Project is located within the "Heart of Mayacamas to Berryessa" focal area ("Heart of M2B focal area") of the larger M2B project area (**Figure 7**), which ranges from San Pablo Bay in the South to Glenn County in the north. The significant protected areas that were identified in Heart of M2B focal area are the Pepperwood Preserve and lands owned and managed by the Bureau of Land Management, referred to as CPAD+ nodes in **Figure 7** (or as "Protected Area Nodes" throughout this report). The Guenoc Ranch site does not include any of the Protected Area Nodes within its boundaries. However, multiple M2B Paths were identified and are discussed in the following sections.

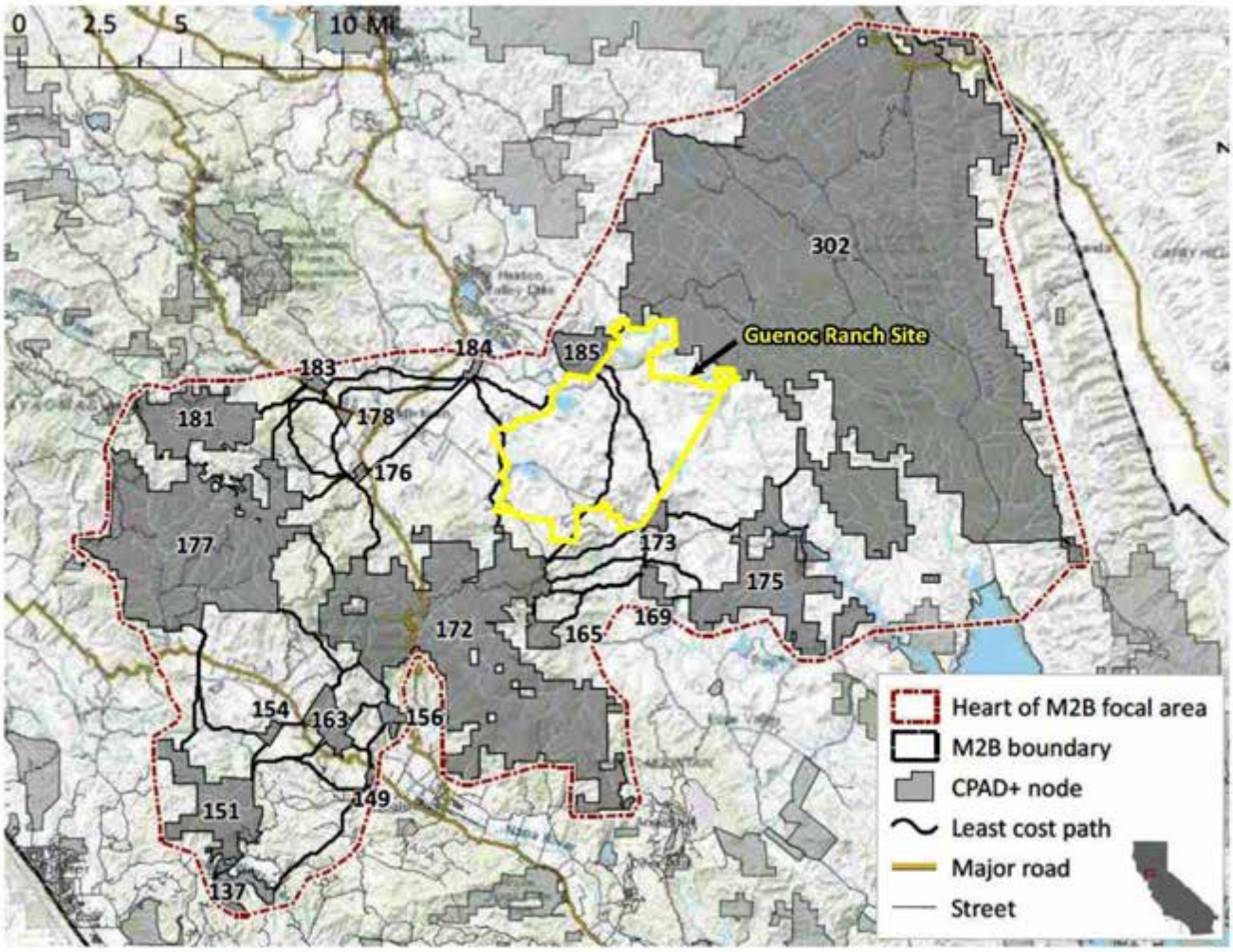


FIGURE 7: GUENOC RANCH SITE AND HEART OF MAYACAMAS TO BERRYESSA FOCAL AREA

BASE MAP SOURCE
Building habitat connectivity for climate adaptation through the heart of the Mayacamas to Berryessa region
Figure 9, pg 42
Pepperwood Preserve, October 2018; Project Site added by WRA, 2020

4.3 | M2B IDENTIFIED RIPARIAN CORRIDORS

The M2B project identified one riparian least cost path, along Putah Creek, which is located on the northern edge of the Guenoc Ranch site. Although a small tent camp area is planned along Putah Creek, this limited impact Project element will not constrain the regionally significant LCP along Putah Creek.

On the whole, the Project was designed to avoid riparian areas to the maximum extent feasible. As a result, the most permeable riparian habitat areas are preferentially avoided by the Project. Protected setbacks have been implemented throughout the Project's riparian areas and have been avoided to the maximum extent feasible. Where riparian areas are encroached upon, mostly due to construct road crossings, the impacts to the riparian areas are temporary and are not significant at a regional scale. In addition to the setbacks observed by the Project, the 2,765 acre Designated Open Space (see **Figure 2**), which runs mostly north to south through the Project site along the majority of Bucksnort Creek, further enhances connectivity by augmenting the riparian setback protections. **Figure 8** shows the M2B riparian permeability and LCP outputs with the Project components overlaid.

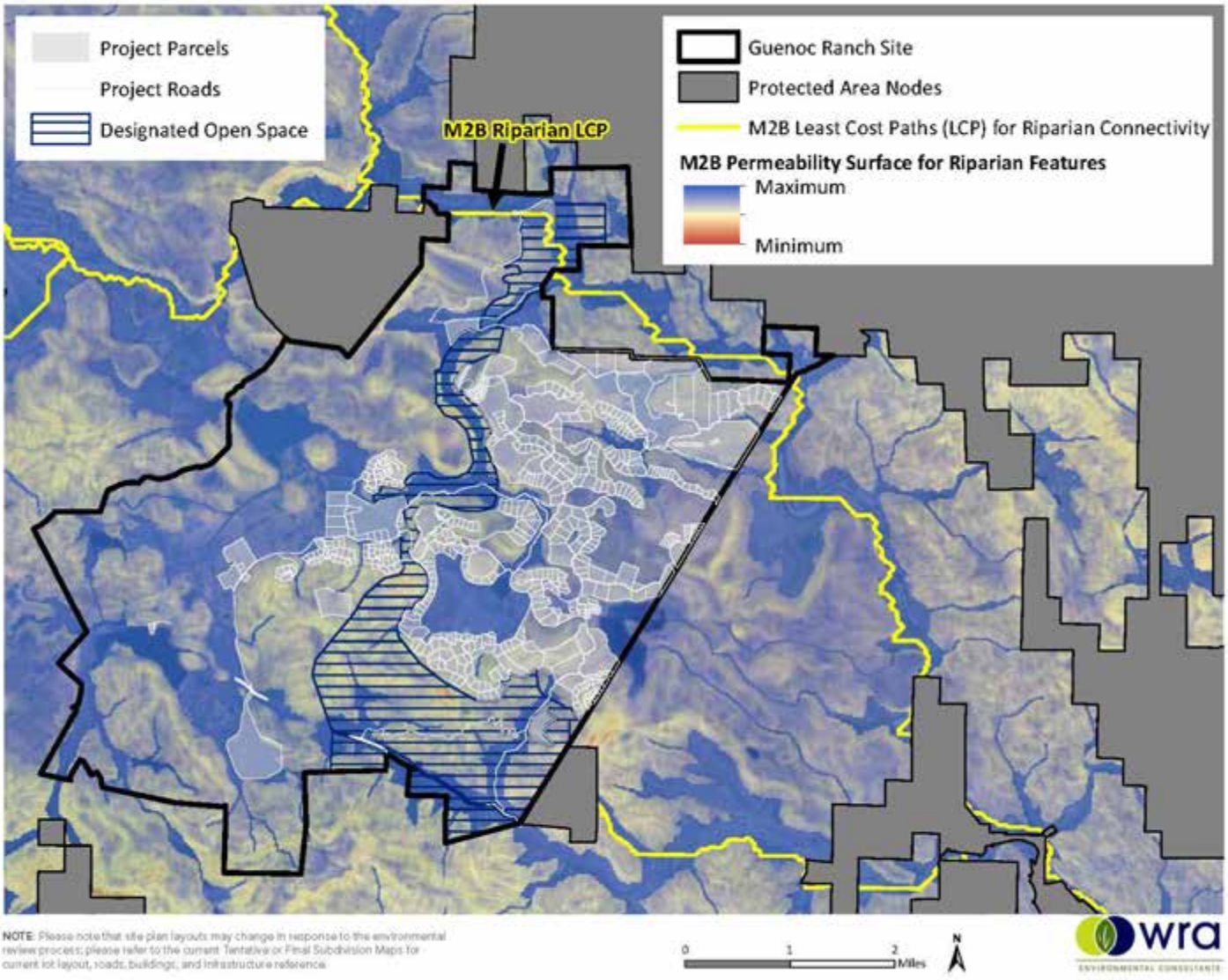


FIGURE 8: M2B-IDENTIFIED RIPARIAN LCPs & PROJECT SITE PLAN

4.4 | M2B IDENTIFIED TERRESTRIAL CORRIDORS

The M2B study identified two primary terrestrial LCPs, which generally run north-south through the Project site (see "Terrestrial LCP 1" and "Terrestrial LCP 2" in **Figure 9**). In most cases, these terrestrial LCPs will remain intact and unobstructed after Project completion; the Project constrains LCPs in only a few segments and areas.

Beyond the LCPs, much of the broader area identified as having high terrestrial permeability for wildlife will also remain unaffected by the Project. Many of these high terrestrial permeability areas also intersect with areas identified for grazing (which is also conducive to support wildlife transit), oak preservation, and the Designated Open Space. In particular, the 2,765 acre Designated Open Space (**Figure 2**), encompasses nearly all of Terrestrial LCP 1. Because the Designated Open Space is also largest along the southern part of the site, it provides connectivity between Terrestrial LCP 1 and LCP 2. For this reason, even if the LCP 2 encounters greater constraints, terrestrial wildlife connectivity between protected areas in the region would still be maintained through LCP 1.

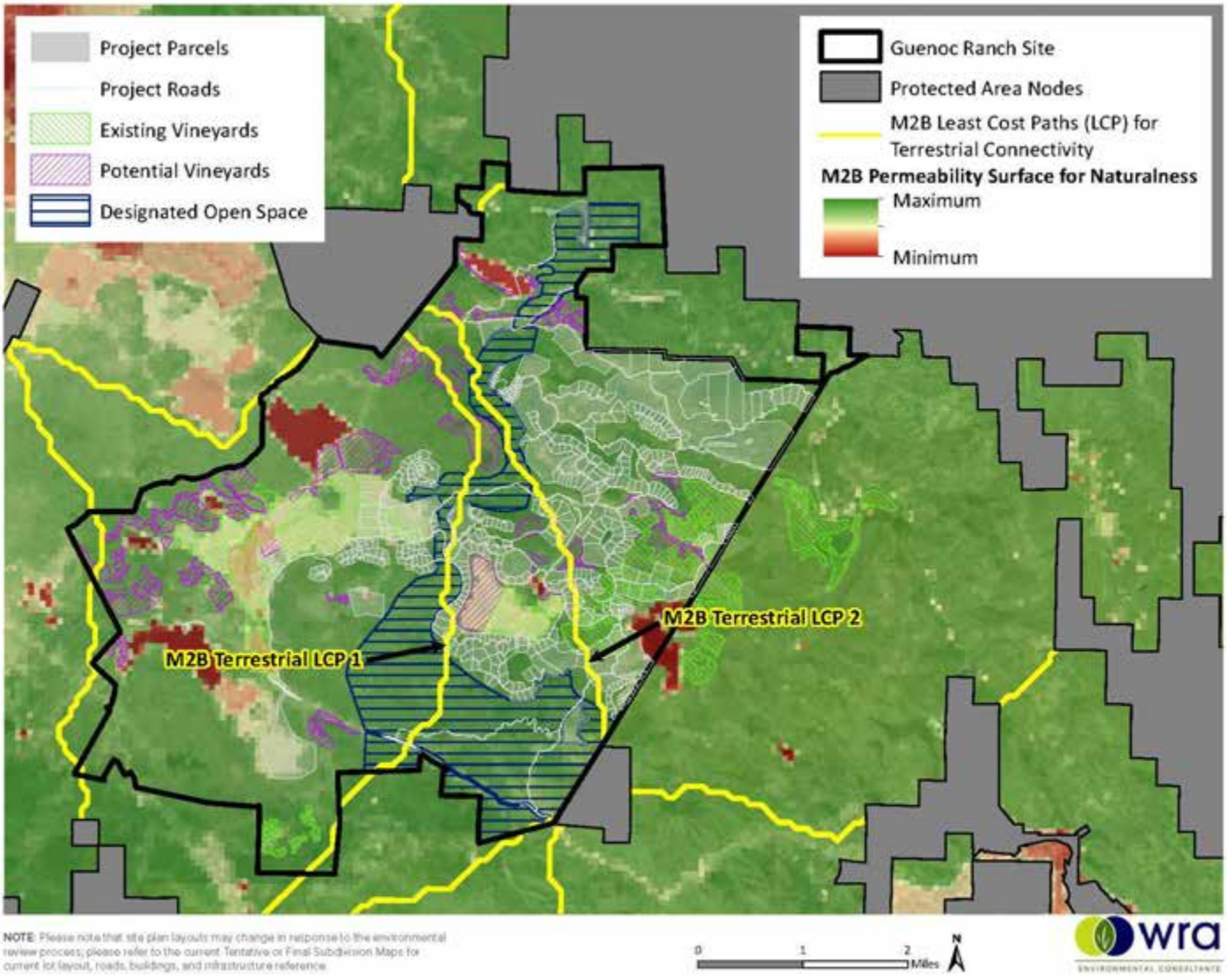


FIGURE 9: EXISTING TERRESTRIAL CORRIDORS & PHASE 1 PROJECT SITE PLAN

4.5 | POTENTIAL CONSTRAINTS

A variety of factors can reduce the permeability of the landscape with respect to wildlife transit. However, for these factors to reduce permeability to the extent that gene flow is impacted, structures such as wildlife impermeable fences, high traffic roads (such as multi-lane interstates), or other major barriers would need to be present to substantially impact movement of large terrestrial mammals (which terrestrial connectivity studies generally focus on). Similarly, some road crossing types could result in barriers to aquatic wildlife. Housing, when constructed in very high densities may also result in barriers to gene flow for some wildlife or even plant species.

However, the Project actively avoids any of these substantial barriers to landscape permeability. In the limited cases where LCPs are potentially constrained, strategies have been identified to facilitate and maximize continued habitat connectivity. The strategies are described in detail in the following section.

5 | APPLICANT SPONSORED HABITAT CONNECTIVITY MEASURES

A majority of the Project accommodates the M2B-identified highly permeable terrestrial and riparian connectivity areas and the associated least cost paths. This is achieved through the overall Project design, which prioritizes a low-density residential footprint, large area of Designated Open Space, riparian set-backs, and oak woodland preservation.

In the limited areas where these M2B Paths are constrained by the Project, existing vineyards, or potential vineyards in leased areas, Proposed Wildlife Paths ("Proposed Paths") were identified in close proximity within the M2B-identified highly permeable terrestrial and riparian areas. The M2B Paths and Proposed Paths are partially protected in the Designated Open Space. For the remainder of M2B Paths and Proposed Paths, the applicant-sponsored habitat connectivity measures ("Measures") to establish a series of Habitat Connectivity Easements within the Ranch's rural landscapes and Project's residential parcels will provide long-term protection for wildlife movement throughout the Ranch site; these Habitat Connectivity Easements will further require the use of Wildlife-Friendly Fencing to facilitate wildlife movement. The process to identify Proposed Path routes and Habitat Connectivity Easements is described in this section. This section further delineates the primary purpose and restrictions of the Habitat Connectivity Easements.

5.1 | PROPOSED WILDLIFE PATHS

As described in the previous section, the M2B Paths are mostly accommodated by the Project site plan. However, limited M2B Paths overlap with various Project and Ranch features, including parcels and associated residential and commercial development; existing vineyards, some of which may be removed to accommodate the Project; and leased areas, some of which may eventually become vineyards.

Given these potential constraints, equivalent Proposed Wildlife Paths ("Proposed Paths") were identified in areas less constrained by these Project and Ranch features. These Proposed Paths are in close proximity to the M2B Paths and are within the M2B highly permeable terrestrial and riparian areas.

The mechanisms to protect the M2B Wildlife Paths and Proposed Wildlife Paths are described below.

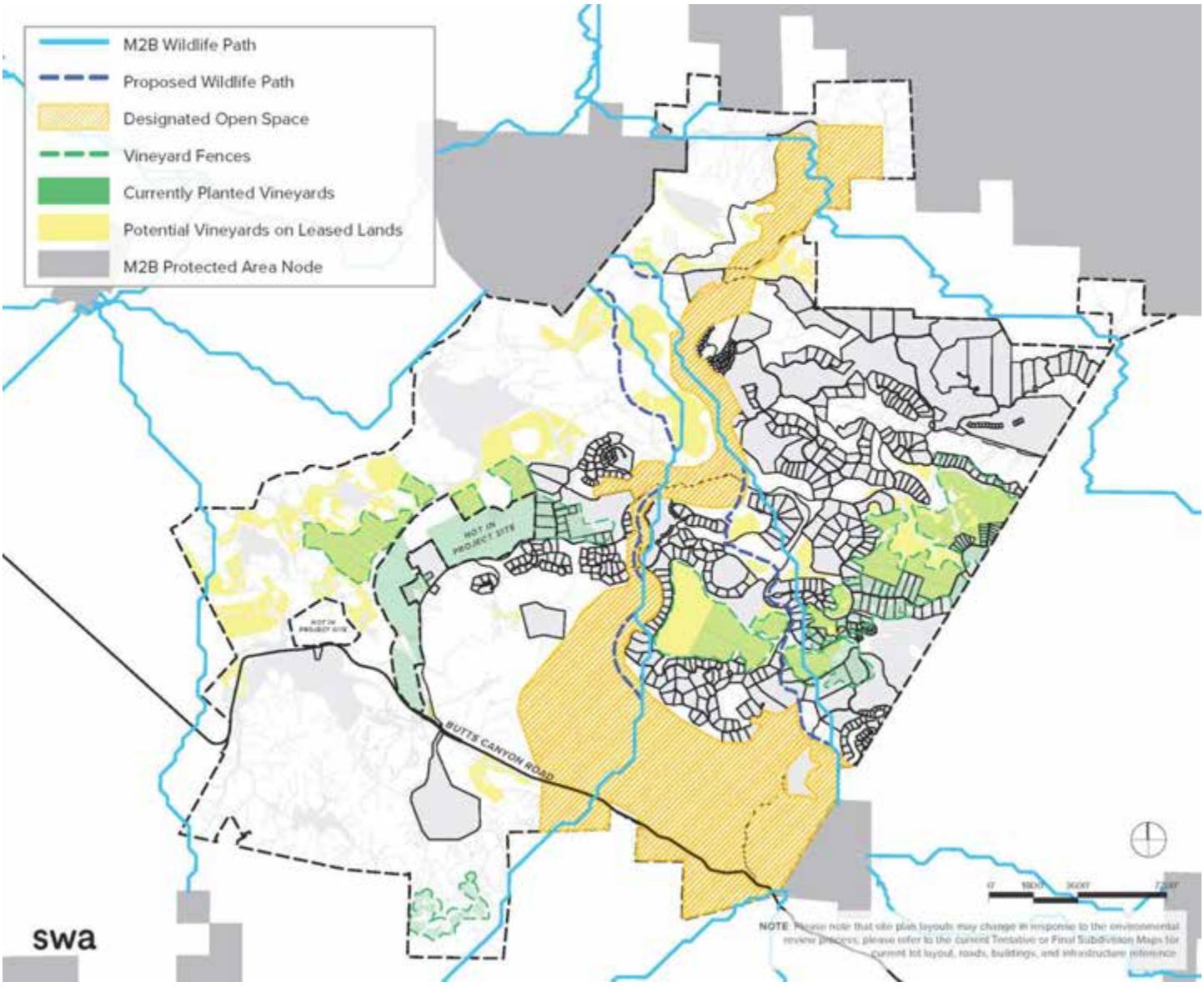


FIGURE 10: PROPOSED WILDLIFE PATHS

5.2 | DESIGNATED OPEN SPACE PROTECTION

This Designated Open Space, spanning from the far northern to the far southern edge of the Ranch site, predominately protects the Bucksnort Creek riparian corridor as well as wilderness hillsides along the southeastern portion of the Ranch (see **Section 2.3**). Development is prohibited within this area and therefore offers significant long-term wildlife protection. This varied, dynamic, and protected habitat in the Designated Open Space coincides with a major portion of the M2B-identified highly permeable areas and M2B Paths (see **Figure 10**).

The Designated Open Space will also host two Proposed Path segments. Near the center of the Ranch site, the western M2B Terrestrial Path 1 is constrained by the Project parcels. However, this path is easily accommodated in close proximity in the highly permeable terrestrial land protected in the Designated Open Space (**Figure 11)**. This Proposed Path allows for a minimum of a 475' wide passage for wildlife and, in many areas, an even wider area of wildlife passage.

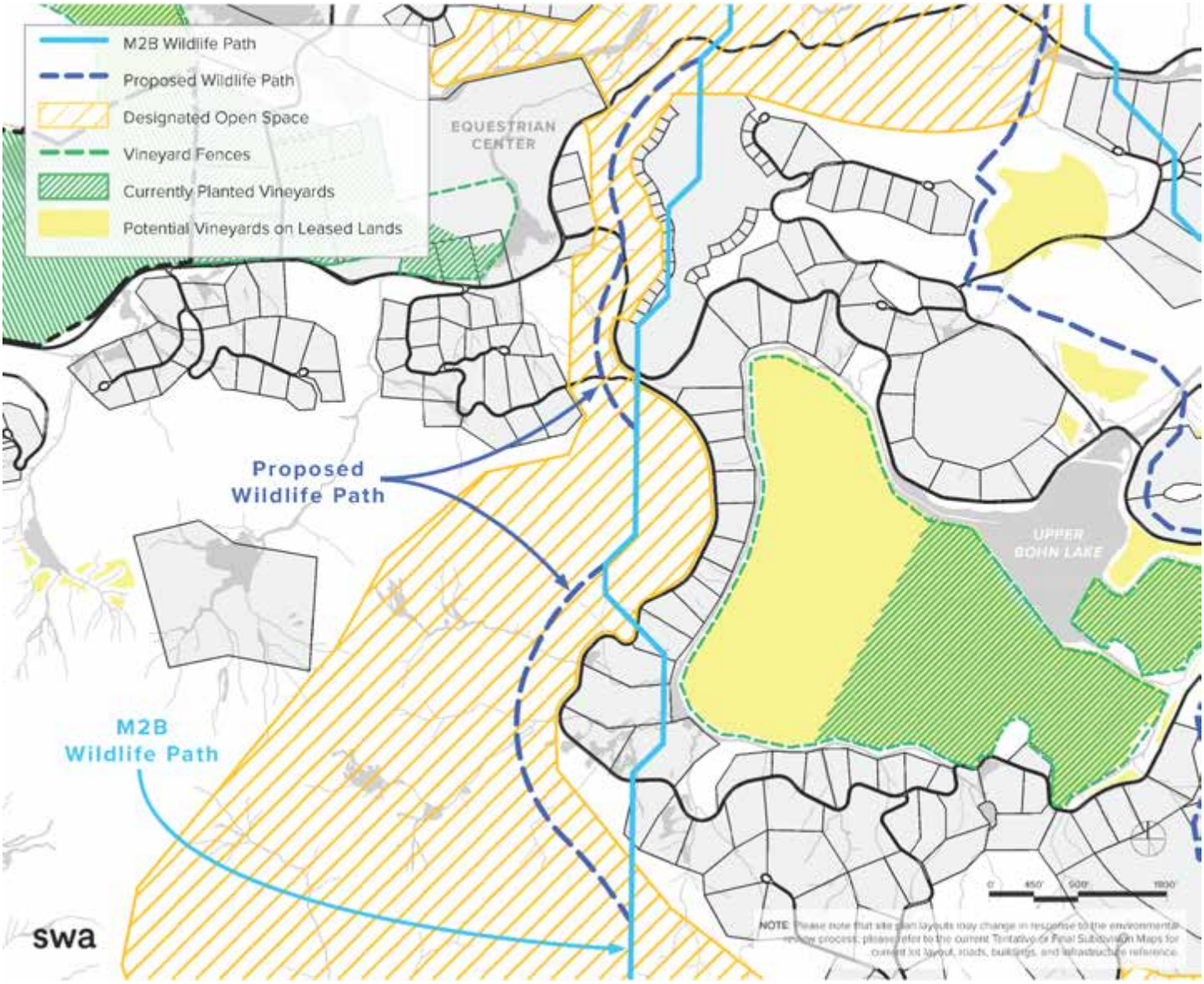


FIGURE 11: PATH PROTECTION IN DESIGNATED OPEN SPACE

5.3 | HABITAT CONNECTIVITY EASEMENTS

As an additional effort to support long-term habitat protection within this area, the Project has committed to augmenting the Designated Open Space with a series of Habitat Connectivity Easements ("Habitat Easements"). The routing of the M2B Paths and Proposed Paths guided the placement of the Habitat Easements throughout the Ranch's rural landscapes and Project parcels.

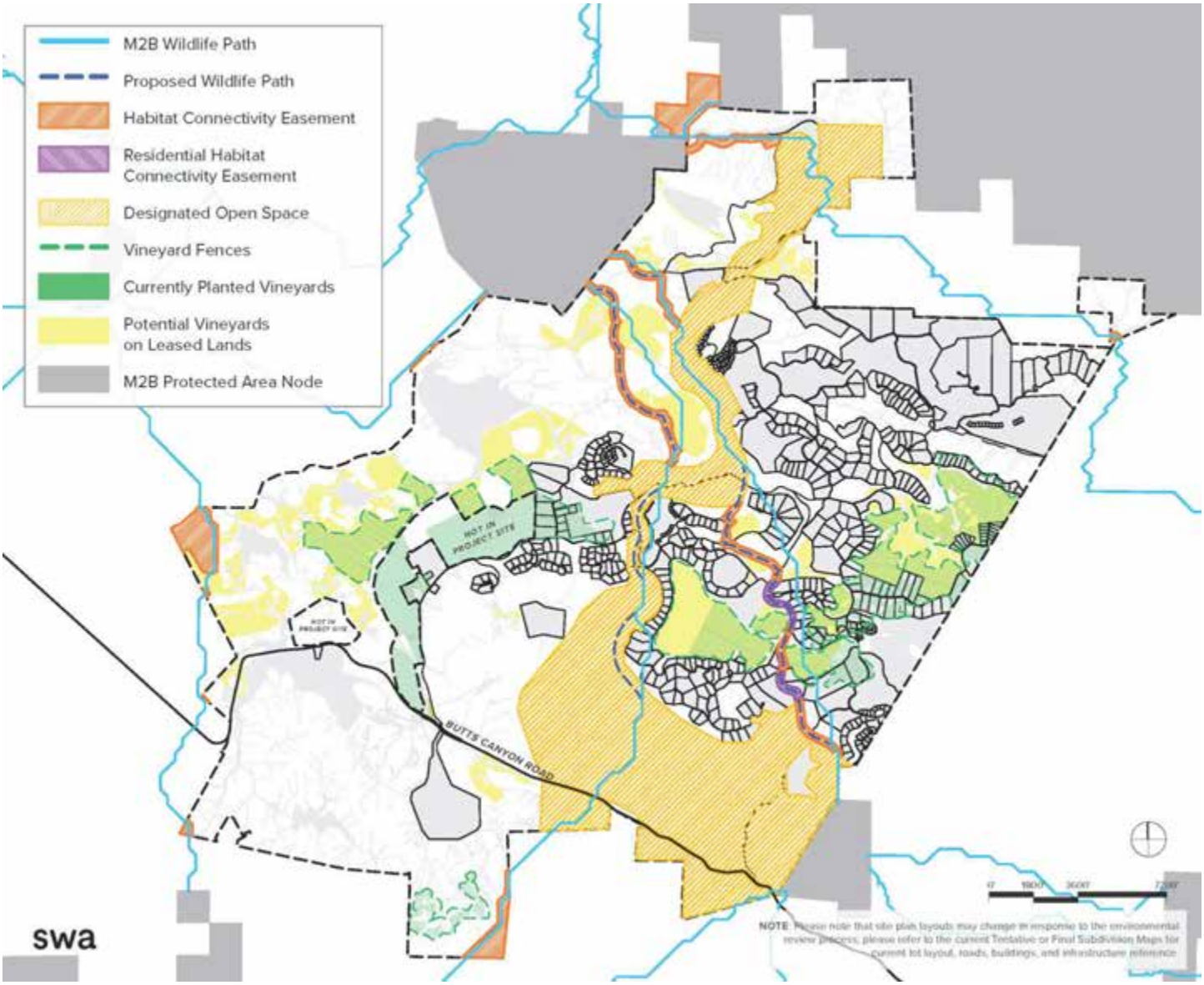


FIGURE 12: PATH PROTECTION IN HABITAT CONNECTIVITY EASEMENTS

These dispersed Habitat Easements will protect wildlife connection routes and support general habitat permeability. For the most part, these Habitat Easements are 300 feet wide in order to accommodate a recognized standard passage width for wildlife movement; the Habitat Easements narrow to less than 300 feet in only a few select locations in order to accommodate Project parcels, existing vineyards, or potential vineyards. The Habitat Easements will also protect M2B Paths near the edges of the Ranch property boundary, including those on neighboring properties, to support coordinated wildlife protection priorities with the surrounding property owners and offer protection to larger-scale wildlife movement patterns. Finally, two Habitat Easements routes near the northwest portion of the Ranch will safeguard wildlife routes to a neighboring M2B-identified Protected Area Node (see **Figure 12**). Only Wildlife-Friendly Fencing, which facilitates the movement of wildlife, can be installed in any of the Habitat Easements.

5.4 | HABITAT CONNECTIVITY EASEMENTS IN RESIDENTIAL PARCELS

One of the M2B Path segments located between Upper and Lower Bohn Lake is currently constrained by existing vineyards and vineyard fencing and will potentially be constrained by future Project development. Therefore, Proposed Path was routed slightly west within the M2B-identified highly permeable landscape and protected with a Habitat Easement within both residential villa estate parcels and the rural landscape.

These Habitat Easements will maintain habitat connectivity on residential landscapes while also offering a nature-based complement to the 1.5 acre maximum residential development footprint. These easements are predominately 300 feet wide in order to provide a well-buffered wildlife passage. The easement decreases to less than 300 feet wide in some areas in order to provide adequate accommodation for potential residential development; however, these areas with less than 300 feet of passage are generally surrounded by current and potential undeveloped rural and residential landscapes.

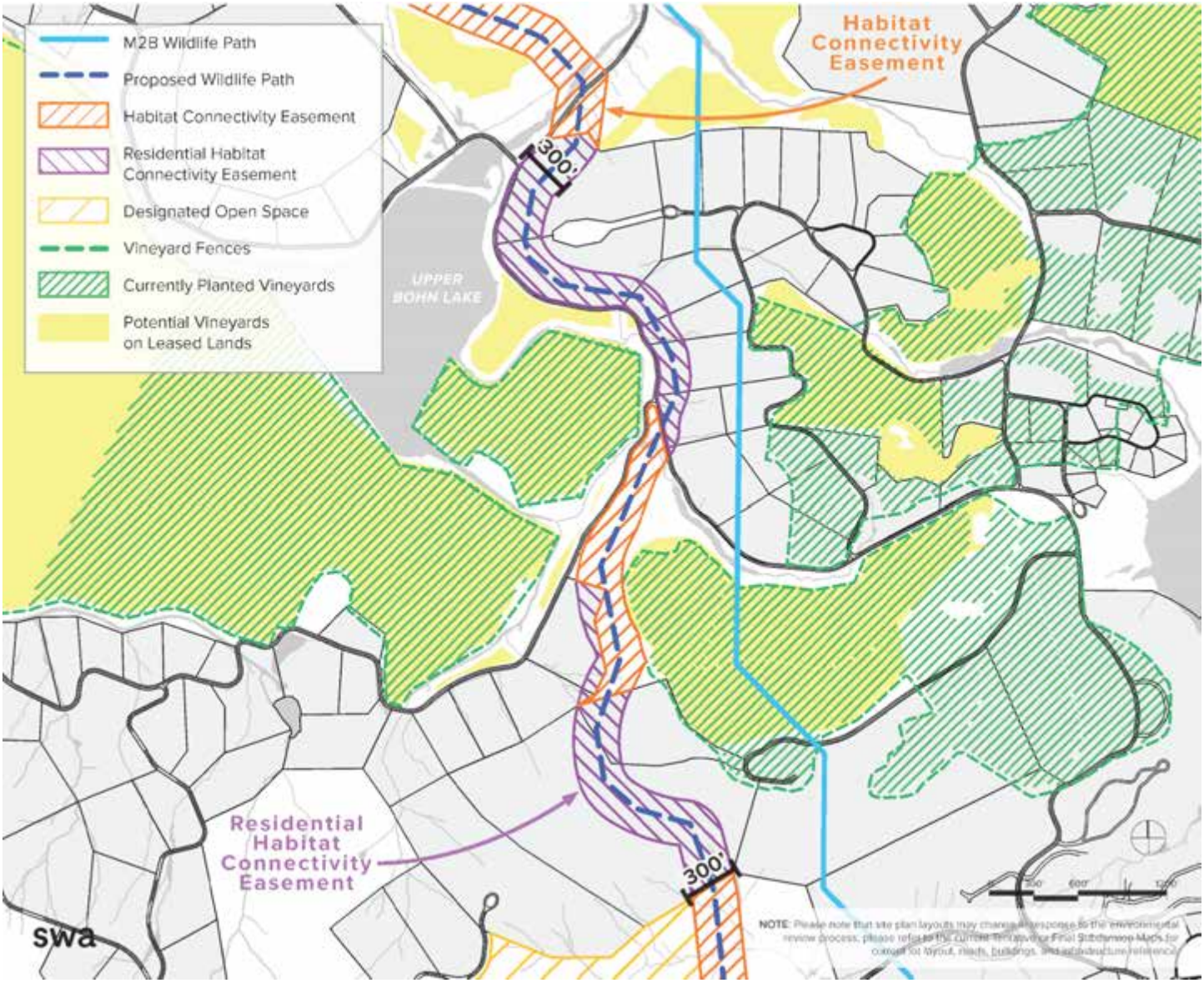


FIGURE 13: PATH PROTECTION IN RESIDENTIAL HABITAT CONNECTIVITY EASEMENTS

If residential villa estate property owners with a Habitat Easements within their parcel would like to install fencing, they will have two options. First, if they would like to install fencing along the perimeter or anywhere within the Habitat Easement, then only Wildlife-Friendly Fencing which allows for wildlife movement is allowed. Second, if fencing which does not allow for wildlife movement is requested, then this fencing cannot be anywhere within the Habitat Easement.

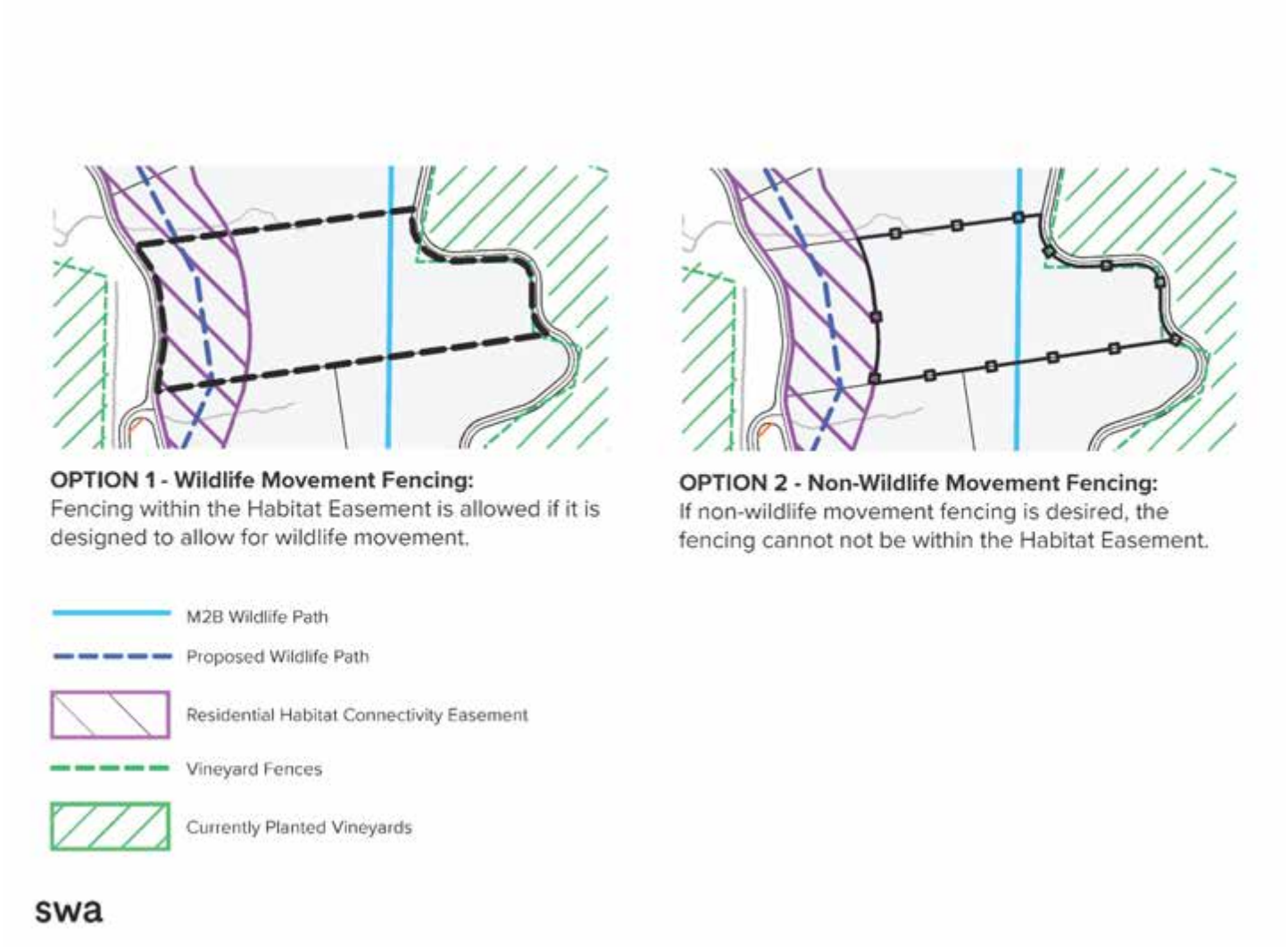


FIGURE 14: RESIDENTIAL HABITAT CONNECTIVITY EASEMENT AREA FENCING OPTIONS

5.6 | SUMMARY OF PROJECT SPONSORED HABITAT CONNECTIVITY MEASURES

As described in the previous sections, these applicant-sponsored habitat connectivity Measures are designed to allow continued and long-term wildlife movement throughout the Ranch site. These Measures will further service regional wildlife movement patterns throughout larger M2B study area. The M2B Paths within the Ranch and Project area are largely protected; in the few areas where the M2B Paths are constrained by existing vineyards, potential lessee vineyards, or the Project, the Applicant identified Proposed Wildlife Paths to provide equivalent wildlife passage in close proximity to the M2B Paths. The Proposed and M2B Paths are protected through a variety of mechanisms, including:

- Ensuring a significant portion of the M2B Paths and Proposed Paths are long-term protected in the Project's 2,765 acre **Designated Open Space**;
- Establishing **Habitat Connectivity Easements** to facilitate key wildlife passages routes along M2B Paths and Proposed Paths throughout the Ranch's rural landscapes and Project development; these easements safeguard passage to a Protected Area Node identified in the M2B study, protect M2B paths along the Ranch boundary, and dedicate a primarily 300 foot wide easement through a series of residential parcels; and
- Allowing only **Wildlife Friendly Fencing** within the Habitat Connectivity Easements in order to facilitate wildlife movement.

Together, the Designated Open Space and habitat connectivity easements offer approximately 3,200 acres of protected habitat connectivity landscapes through the Ranch site. These Measures supplement the Project's broader framework of habitat protection described above, including a low-density site design; native landscaping; avoidance of and setback from riparian area; and approximately 1,950 acres of preserved oak woodlands.

It is also important to note that a significant portion of the residential and commercial development outside of Habitat Easements could elect to build no fencing or fencing which facilitates wildlife movements; similarly, the potential vineyards in leased areas may not be planted with vineyards and therefore not protected with impermeable vineyard fencing. These outcomes would also be beneficial to wildlife movement.

All of these efforts create a context minimizes constraints to wildlife movement patterns throughout the Ranch, avoids the creation of substantial barriers to landscape permeability, and maintains connectivity with protected habitats in the Project and Ranch vicinity.

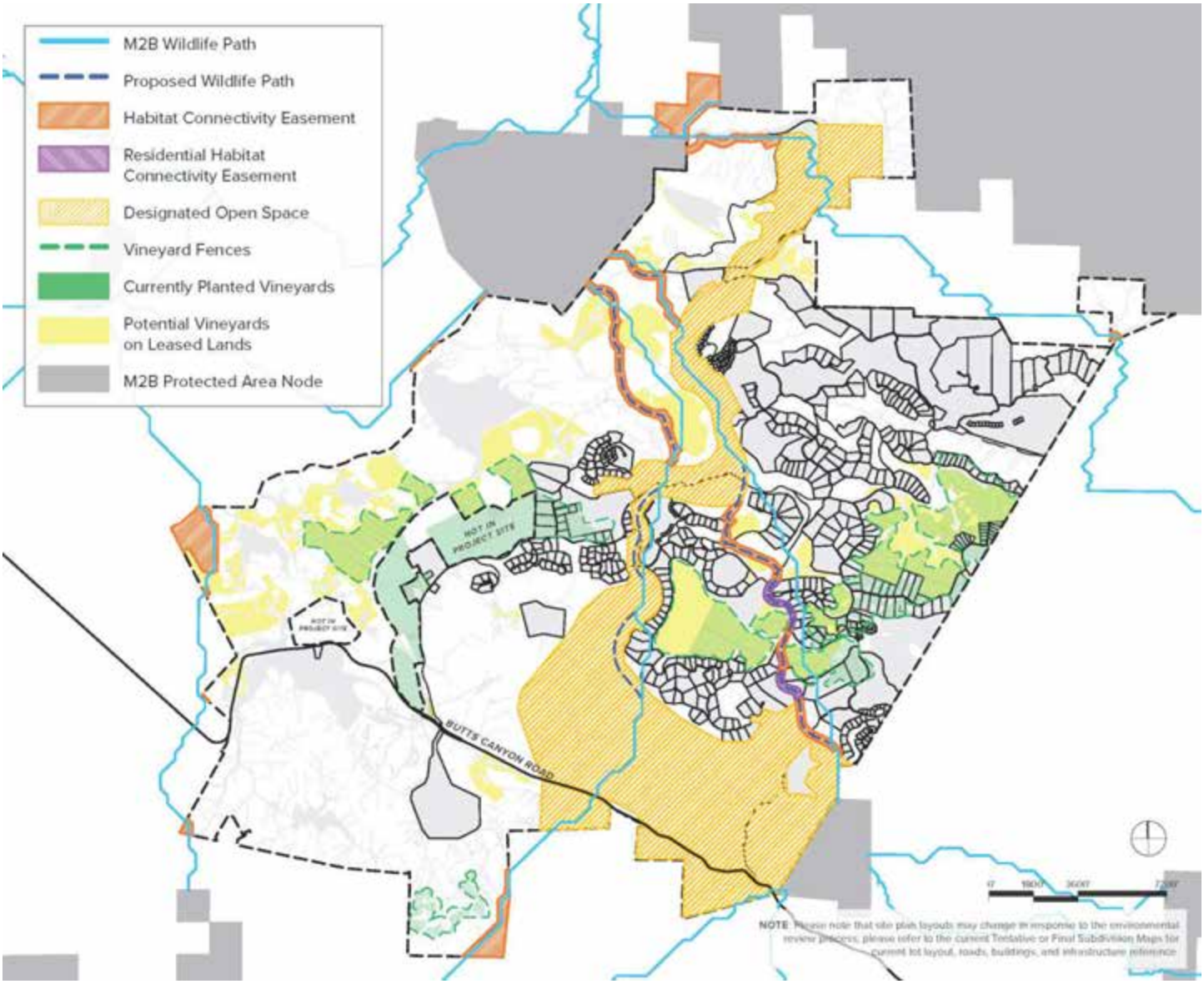


FIGURE 15: GUENOC VALLEY MIXED USE PROJECT HABITAT CONNECTIVITY MEASURES

5.7 | ALTERNATIVE VINEYARD DEVELOPMENT SCENARIO

As a final note, Project potentially represents a net benefit to habitat connectivity and an improvement over the existing 2009 EIR vineyard entitlements for the property. As demonstrated above, the Project accommodates all of the M2B Paths and Proposed Paths through a series of Measures.

In contrast, if the all irrigation water rights areas were developed for the purpose of vineyards, wildlife travelling along approximately two miles of M2B Paths would likely be permanently obstructed from easily moving through the Ranch. For some of these obstructed pathways, identifying alternative wildlife routes in the nearby rural landscape vicinity appears to be difficult.

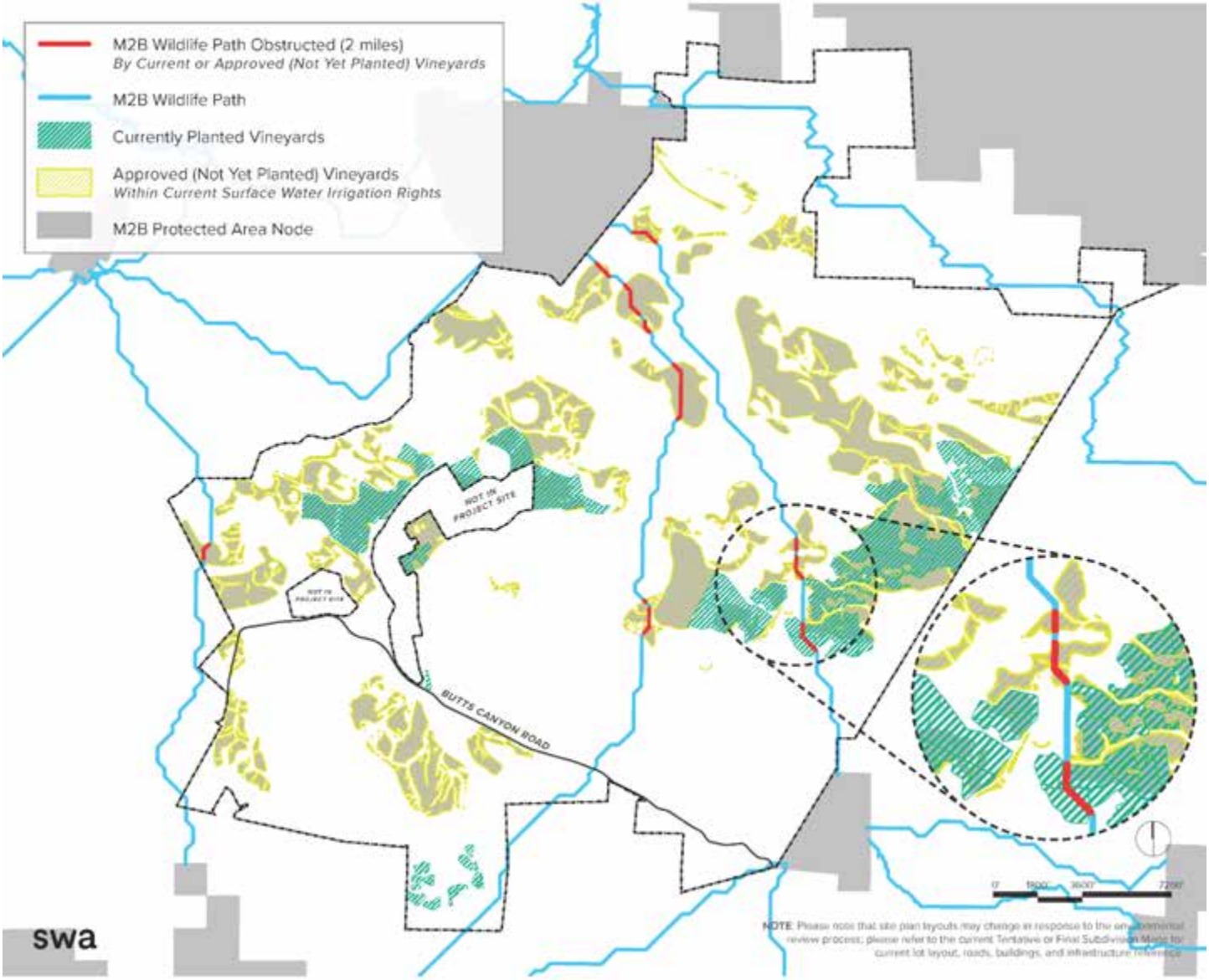


FIGURE 16: CONSTRAINED M2B PATHS IN VINEYARD DEVELOPMENT SCENARIO

6 | IMPLEMENTATION

The implementation of the Applicant's Measures will be guided by the Project's Design Guidelines, Homeowners Association, recorded parcel restrictions ("Recorded Restrictions") within the Tentative Map, and EIR Mitigation Measures for wildlife protection such as additional pre-construction surveys. These requirements will be required by the County of Lake at time of building permit, recorded on the parcel deed, and managed for congoing compliance with the HOA. These documents and frameworks will ensure that the identified habitat paths, alternative habitat paths, and residential habitat easements are maintained throughout the development of the Project.

6.1 | DESIGN GUIDELINES

The Design Guidelines, as approved by the Board of Supervisors, are an essential part of the GVD zoning district and streamline the process to show compliance with the GVD goals and objectives for obtaining future building permits from the County. Site improvements should follow or be in substantial conformance with the parameters set forth within the GVD Design Guidelines. The Design Guidelines must be followed for the construction of new buildings, renovations, or expansions of existing structures.

To ensure the Measures are achieved, the Design Guidelines will outline the fencing restraints and allowances throughout the Project, specifically for any residential parcel. All fencing will follow the guidelines for wildlife friendly fencing – any fencing that allows the permeability of animal movement instead of impeding in a significant way – as provided by the Army Corps of Engineers in their comment letter.

6.2 | RECORDED RESTRICTIONS

In the event that a residential or commercial parcel is recorded with a deed restriction, all structures and site improvement must comply with the boundaries of the defined restriction. Examples of deed restrictions include limiting development to an identified envelope or requiring development to be outside of identified riparian setbacks. Known deed restricted areas include easements for habitat protection, such as oak woodlands and habitat corridor preservation. AS with the habitat connectivity easements and designated open space, restrictions will be permanently recorded against the parcel deeds and memorialized on the Final Maps filed with the County of Lake recorder.

As outlined in this plan, Recorded Restrictions will be the long-term commitment of the Project in the preservation of wildlife movement on the site. Fencing within these restricted areas will adhere to the guidelines within this document and the Design Guidelines.

6.3 | HOMEOWNERS ASSOCIATION

Future owners and/or owner consultants shall carefully review the Guiding Documents such as the Design Guidelines, Open Space Plan, Wildfire Prevention Plan, and the associated CC&Rs prior to commencing any design schematics or construction. Owners may not obtain building and/or grading permits until final design approval has been authorized from the Homeowners Association (HOA). After authorization by the HOA, the

permits may proceed to the County for final review and approval and must include the Guenoc Valley Design Guidelines checklist, and be found in substantial conformance with the items on said list.

The GVD developers recognize that each parcel within the GVD has its own site-specific characteristics and that each Owner may have their own needs. In addition to Deed Restrictions, there may be further development restrictions within each parcel. These further restrictions are managed by the HOA, through guiding documents such as the CC&Rs, and will be referenced in the sales documentation; further potential restrictions include pathway easements, grazing corridors, or specific land management techniques.

7 | REFERENCES

Analytical Environmental Services (AES). 2008. Langtry Farms Water Rights Modification Project Oak Tree Replacement Plan.

Analytical Environmental Services (AES). 2009. Guenoc Water Rights Modification Project Final Environmental Impact Report.

Bury R. B. 1972. Habits and home range of the Pacific pond turtle, Clemmys marmorata, in a stream community. Ph.D. dissertation, University of California, Berkeley.

[FEIS] Fire Effects Information System, U. S. Forest Service 2020. Black Bear info. Accessed May 5, 2020. https://www.fs.fed.us/database/feis/animals/mammal/uram/all.html#Home%20range%20and%20density

Grinnell, J., J. S. Dixon, and J. M. Linsdale. 1937. Fur-bearing mammals of California. 2 Vols. Univ. California Press, Berkeley. 777pp.

Harrison, D.J. 1992. Dispersal characteristics of juvenile coyotes in Maine. The Journal of Wildlife Management 56:128-138.

Hilty, J.A., W.Z. Lidicker Jr., and A.M. Merenlender. 2006. Corridor Ecology: The Science and Practice of Linking Landscapes for Biodiversity Conservation. Island Press, Washington.

MAHA Developments. 2019. Specific Plan of Development for the MAHA resort at Guenoc Valley.

[M2B] Gray M, Comendant T, Micheli L, Merenlender A. 2018. Mayacamas to Berryessa Connectivity Network (M2B) Final Report. A technical report prepared by the Dwight Center for Conservation Science at Pepperwood, Santa Rosa CA, for the California Landscape Conservation Partnership. 34 pp

[M2B] Gray M, Micheli L, Comendant T, Merenlender A, Brown H, Johnston A, Koehler C, Palladini M, Smythe T. 2018. Building habitat connectivity for climate adaptation through the heart of the Mayacamas to Berryessa region. A technical report prepared by the Dwight Center for Conservation Science at Pepperwood, Santa Rosa CA, for the California Landscape Conservation Partnership. 138 pp

Penrod, K., P. E. Garding, C. Paulman, P. Beier, S. Weiss, N. Schaefer, R. Branciforte and K. Gaffney. 2013. Critical Linkages: Bay Area & Beyond. Produced by Science & Collaboration for Connected Wildlands, Fair Oaks, California, in collaboration with the Bay Area Open Space Council's Conservation Lands Network.

Rathbun, G. B., N. J. Scott, T. G. Murphey. 2002. Terrestrial habitat use by Pacific pond turtles in a Mediterranean climate. Southwestern Naturalist 47(2):225–235.

Thomson, R.C., A.N. Wright, and H.B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. Co-published by the California Department of Fish and Wildlife and University of California Press. Oakland, California.

University of Michigan. Animal Diversity Web; Entry for coyote, "*Canis latrans*". Online at http://animaldiversity.ummz.umich.edu/accounts/Canis_latrans; accessed January 2020.

Zeiner, D.C., W.F. Laudenslayer Jr., K.E. Mayer, and M. White. 1990. California's Wildlife, Volume I-III: Amphibians and Reptiles, Birds, Mammals. California Statewide Wildlife Habitat Relationships System, California Department of Fish and Game, Sacramento.

Western Regional Climate Center (WRCC). 2016. Middletown, CA: Period of Record Monthly Climate Summary. Available online at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5598. Accessed June 2019.
34400\13329124.1

APPENDIX WRA

WRA RESPONSE TO COMMENTS MEMORANDUM

MEMORANDUM

To: Peter Bontadelli, AES
Kelli Raymond, AES

From: Matt Richmond, Associate Principal
Scott Yarger, Biologist, ISA-Certified Arborist

Date: May 15, 2020

Subject: **Guenoc Valley Mixed-Use Planned Development Project Draft Environmental Impact Report (DEIR) Responses to Comments**

The purpose of this memorandum is to respond to public comments on the Guenoc Valley Mixed-Use Planned Development Project Draft Environmental Impact Report (DEIR). Specifically, this memorandum provides additional information on the classification, quantification of impacts, and proposed mitigation for oak woodland and savanna habitats, in response to public comments from the Center for Biological Diversity (CBD), and the California Wildlife Foundation, California Oaks program (CWF/CO).

The comments from both organizations are similar in contesting that an incorrect definition of oak woodland was used to characterize and map oak woodland and savanna communities in the Biological Resources Assessment (BRA; WRA 2020). However, as we clarify below, WRA's mapping and classification of oak (*Quercus* spp.) woodland and savanna was consistent with the California Fish and Game Code (CFGC) §1361 definition of oak woodlands, and these communities were treated as sensitive within the BRA and DEIR. Public comments from the aforementioned organizations are excerpted below, followed by additional information addressing the comments.

This memo does not address the Oak Woodland Mitigation Plan, as that document was not prepared by WRA nor did WRA contribute to the document. However, WRA does provide recommendations for preservation to impact ratios for consideration.

Center for Biological Diversity Comment

i. Oak Woodlands

The DEIR fails to adequately assess and mitigate impacts to oak woodlands, ignores the best available science, and violates California Fish and Game Code. The DEIR applies an erroneous definition of oak woodlands. According to California Fish and Game Code, oak woodlands are defined as "an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover." (Cal Fish & Game Code § 1361.) According the DEIR, "Areas with approximately 60 percent or less total canopy cover with less than two thirds of tree canopies touching are mapped as oak savanna. Areas with greater cover of blue oaks or a higher percentage of tree canopies touching are considered woodland." (DEIR at 3.4-20). Thus, the DEIR does not adequately describe the extant oak woodlands in the Project area,

and therefore does not adequately explain nor appropriately mitigate potential impacts to oak woodlands due to the proposed Project. In assigning an arbitrary definition of oak woodlands and oak savanna, the DEIR blatantly violates CA Fish and Game Code.

California Wildlife Foundation/California Oaks Program Comment

California Fish and Game Code defines oak woodlands: "Oak woodlands means an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover." Unfortunately, the DEIR does not conform to state law.

The discussion of blue oak woodland and blue oak savanna on page 3.4-20 of the DEIR uses a definition that eliminates many of the blue oak savanna and woodland habitats that should have been analyzed in the DEIR (underlined text used for emphasis): Although CDFW does not distinguish between blue oak woodland and savanna, blue oak habitats were mapped into two categories to facilitate impact and mitigation calculations. Areas with approximately 60 percent or less total canopy cover with less than two thirds of tree canopies touching are mapped as oak savanna. Areas with greater cover of blue oaks or a higher percentage of tree canopies touching are considered woodland…

Review of the appendices indicates that the erroneous use of the 60 percent figure was used for all oak woodland types (the quoted text below is from page 2,438, which presents page 8 of the proposed Oak Mitigation Plan) (underlined text used for emphasis):

Discussion: The entire DEIR is based on a definition of oak woodlands that does not conform to California law. The maps presented and analysis used throughout the DEIR are flawed. As stated above, the state defines an oak woodland as "an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover." The lands with greater than 10 percent oak canopy cover and less than 60 percent canopy, irrespective of whether canopies are touching, must be analyzed in the DEIR.

Response

To clarify, all areas where the vegetation was dominated by oak tree species at 10 percent or greater absolute cover were mapped and classified as one of the tree-dominated terrestrial communities listed in Table 4 in the BRA (WRA 2020), which include valley oak woodland, blue oak woodland, or blue oak savanna. Each of these tree dominated communities including woodland *and savanna* meet the CFGC § 1361 definition of oak woodland, and impacts to these communities were analyzed and treated as potentially sensitive prior to mitigation.

The distinction between oak woodland and savanna is widely discussed in the scientific literature (Anderson et al. 1999, Bolsinger 1988, Barbour et al. 2007, Sawyer et al. 2009, CNPS 2020), and is recognized within the description of blue oak woodland in Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986). Holland, Barbour et al. (2007), and Sawyer et al. (2009) all describe the blue oak woodland community as being inclusive of lower-density blue oak savannas. The distinction of oak woodland versus savanna varies regionally and across dominant species, and there is no set standard criteria for tree canopy coverage densities to separate oak woodland versus savanna. However, Anderson et al. (1999) reports that; "most authors set the lower limit of canopy coverage of savannas at 5%-10%, with areas of lower tree canopy cover classified as grasslands. However the defined upper limit of tree canopy cover of savannas can range from 25% to 80%." CNPS (2020) reports that the blue oak woodland

and forest alliance "establishes in varied stands and forms one of the most extensive and conspicuous vegetation types in the state. In some cases, oak savannas of *Q. douglasii t*rees are scattered across the landscape, and in other cases, trees of mixed composition form a closed tree canopy."

Within blue oak dominated communities, WRA made a distinction between open savannas with grassy and herbaceous forb dominated understories to woodlands which often had shrubby understories. Areas with 10 to 60 percent absolute cover of blue oak were classified as blue oak savanna, and areas greater than 60 percent absolute cover of blue oak were classified as blue oak woodland. Areas with less than 10 percent canopy cover of blue oak were classified as grasslands. This is consistent with the CFGC §1361 definition of oak woodlands referenced by the commenters. For an example of visual representation showing how these communities were mapped refer to Attachment A – Examples of Oak Woodland and Savanna Mapping Figures.

Similarly, both of these vegetation communities were mapped in accordance with the CFGC definition of oak woodlands, and both blue oak woodland and savanna were described as sensitive within the BRA and in accordance, impacts to these communities were considered potentially significant prior to mitigation.

California Wildlife Foundation/California Oaks Program Comment

The Oak Mitigation Plan provides "recommended" mitigation for circumstances in which there is no significant loss of canopy cover and removal of trees does not convert oak woodlands to oak savanna (using the DEIR's definition, not the definition provided in the California Fish and Game Code), which includes replantings of 2:1 for trees with 3-15 inch-diameter at breast height (dbh) removed and 5:1 for trees with a dbh of 15 inches or greater removed. This pales in comparison to Santa Barbara County's Deciduous Oak Tree Protection and Regeneration Ordinance, which requires a 15:1 mitigation ratio (via replacement planting or protection of naturally occurring oaks between six inches and six feet tall) for removed oak trees (County of Santa Barbara 2003). These mitigation measures for impacts to oak woodlands, as defined by California Fish and Game Code (i.e., an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover), are grossly insufficient, unenforceable, and not based on any science. Such insufficient mitigation would not reduce impacts to oak woodlands to less than significant.

Response

Section 6.2.1 of the BRA (WRA 2020), recommended that an oak woodland mitigation plan be prepared to mitigate for unavoidable impacts to oak trees, through a combination of "enhancement (e.g., weed management within existing oak woodlands), restoration or creation (e.g., oak planting or seeding), transplanting, and/or preservation (e.g., placement of conservation easements over existing stands of high quality oak woodlands at least acre per acre 1:1)." The Oak Mitigation Plan prepared by AES provides for a 1.5:1 preservation ratio for impacts to oak woodland and savanna (acres preserved to acres impacted) for significant loss of oak canopy cover. The commenter suggests that impacts to oak woodland and savanna should be mitigated at a higher ratio and references CFGC and Santa Barbara County's replacement ratios for impacts to individual oak trees which range from 2:1 to 15:1. However, in reviewing numerous other County oak woodland mitigation measures, we believe that a 2:1 ratio (acres preserved to acres impacted) is more consistent with accepted standards for oak woodland mitigation statewide. The University of California's Division Agriculture and Natural Resources (UCANR)

publication, *Oak Woodland Impact Decision Matrix* (UCANR 2008) references a 2:1 mitigation ratio as a typically sufficient ratio to compensate for oak woodland impacts The UCANR document recommends the CEQA practitioner: "determine an appropriate mitigation ratio to determine the amount of in-kind (i.e. same type of woodland such as blue, valley or mixed) area that should be protected to compensate for the likely impacts associated with the proposed project:

a. If you go with a 1:1 replacement this means that 50% of the woodland resources could ultimately be lost to development over the long-run.
b. A 2:1 replacement will more fully compensate for the land impacted by the proposed development."

Other northern California counties including Santa Clara and Napa also recommend a 2:1 or 3:1 ratio. The Santa Clara County Planning Office's *Guide to Evaluating Oak Woodland Impacts* (Santa Clara County 2011) recommends: "As a general guide, the protection of existing oak woodlands through conservation easements should mitigate for the loss of oaks at a ratio equal to 2:1 or 3:1 based on the condition of the oak woodland habitat. 2:1 conservation is recommended for medium quality oak woodland habitat, and 3:1 conservation is recommended for high quality oak woodland habitat."

It is our opinion that the up to 15:1 ratios for impacts to oaks referenced in the Santa Barbara County guidelines are meant to be applied to replacement of individual oak trees on a smaller project scale, and presumably not intended to apply at the community level of impacts in which mitigation is more typically quantified and mitigated for based on acreage impacted to acreage preserved. WRA recommends a 2:1 ratio of preservation to impact for blue oak woodlands and savannas and a 3:1 ratio for valley oak woodlands.

References:

Anderson, R.A.., J.S. Fralish, and J.M.Baskin (eds.). 1999. Savannas, Barrens, and Rock Outcrop Plant Communities of North America. Cambridge University Press.

Barbour, M.G., T. Keeler-Wolf, and A.A. Schoenherr (eds.). 2007. Terrestrial Vegetation of California, 3rd Edition. University of California Press, Berkeley, CA.712 pp.

Bolsinger, C.L. 1988. The Hardwoods of California's Timberlands, Woodlands, and Savannas. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

[CNPS] California Native Plant Society. 2020. A Manual of California Vegetation, Online Edition. Sacramento, California. Online at: http://vegetation.cnps.org/; most recently accessed: May 2020.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Prepared for the California Department of Fish and Game, Sacramento, CA.

Napa County. 2010. Napa County Voluntary Oak Woodland Management Plan. November 2009 Draft.

Santa Barbara County. 2011. A Planner's Guide to Conditions of Approval and Mitigation Measures.

Santa Clara County. 2011. Santa Clara County Planning Office Guide to Evaluating Oak Woodland Impacts. July.

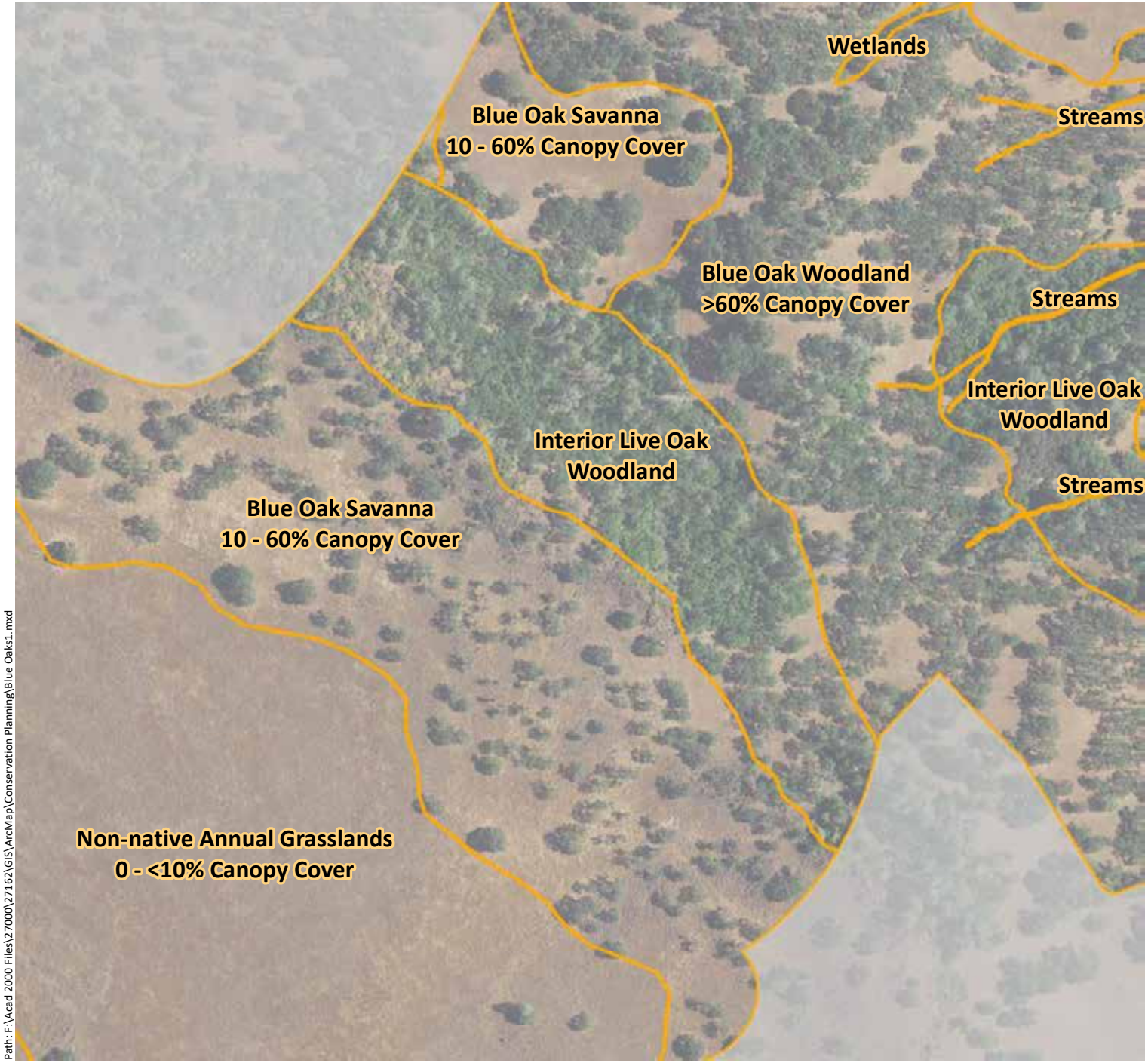
Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, CA. 1300 pp.

[UCANR] University of California Agriculture and Natural Resources. 2008. Oak Woodland Impact Decision Matrix. UC Integrated Hardwood Range Management Program, 163 Mulford Hall, Berkeley, CA 94270.

[WRA] WRA, Inc. 2020. Maha Resort and Guenoc Valley Development Phase 1, Lake County, California. Prepared for Analytical Environmental Services. February.

Attachment A

Examples of Oak Woodland and Savanna Mapping Figures



Land Cover Mapping
Oaks Example #1

Maha Resort and Guenoc Valley
Lake County, CA

Land Cover Types

N

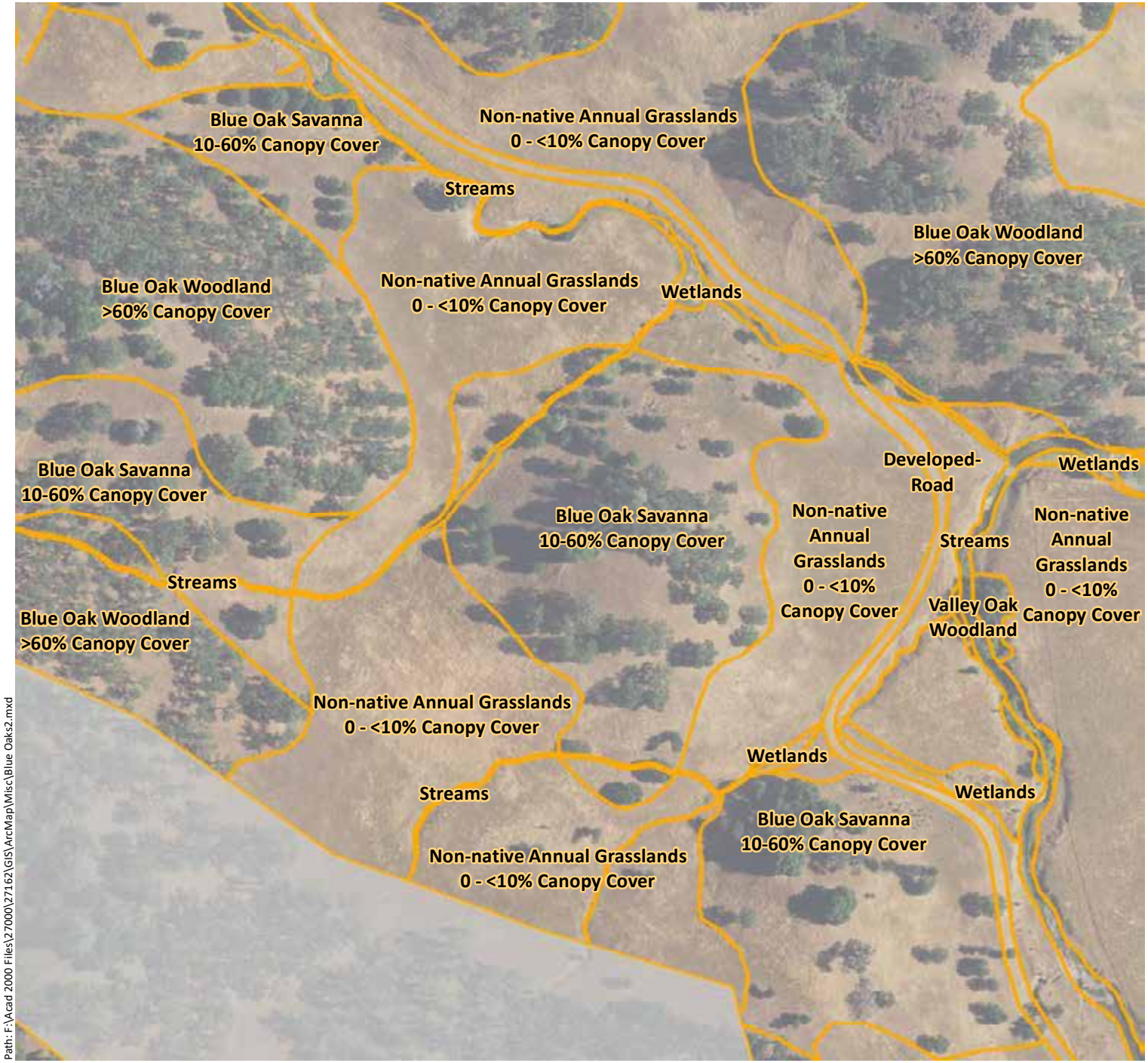
0 100 200

Feet

wra
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162\GIS\ArcMap\Conservation Planning\Blue Oaks1.mxd

Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 5/18/2020



Land Cover Mapping
Oaks Example #2

Maha Resort and Guenoc Valley
Lake County, CA

Land Cover Types

N

0 100 200

Feet

wra
ENVIRONMENTAL CONSULTANTS

Path: F:\Acad 2000 Files\27000\27162\GIS\ArcMap\Misc\Blue Oaks2.mxd

Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: mrochelle, 4/30/2020