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CAPSTONE STUDIO 2021
UNIVERSITY OF CALIFORNIA LOS ANGELES- EXTENSION
LANDSCAPE ARCHITECTURE PROGRAM

FIRE- ADAPTED FUTURE

THE ESSENTIAL ROLE OF
LANDSCAPE ARCHITECTURE IN
COMMUNITY WILDFIRE RECOVERY
AND PLANNING



PREFACE

The Santa Monica Mountains is an environment with a rich history and a long-standing relationship with wildfire. Communities that have sought and found peace within this range have also been faced by the growing hardships that come with living among a fire environment. As environmental threats continue to mount, success can be found through an understanding that fire, biology, and life are intimately connected in California.

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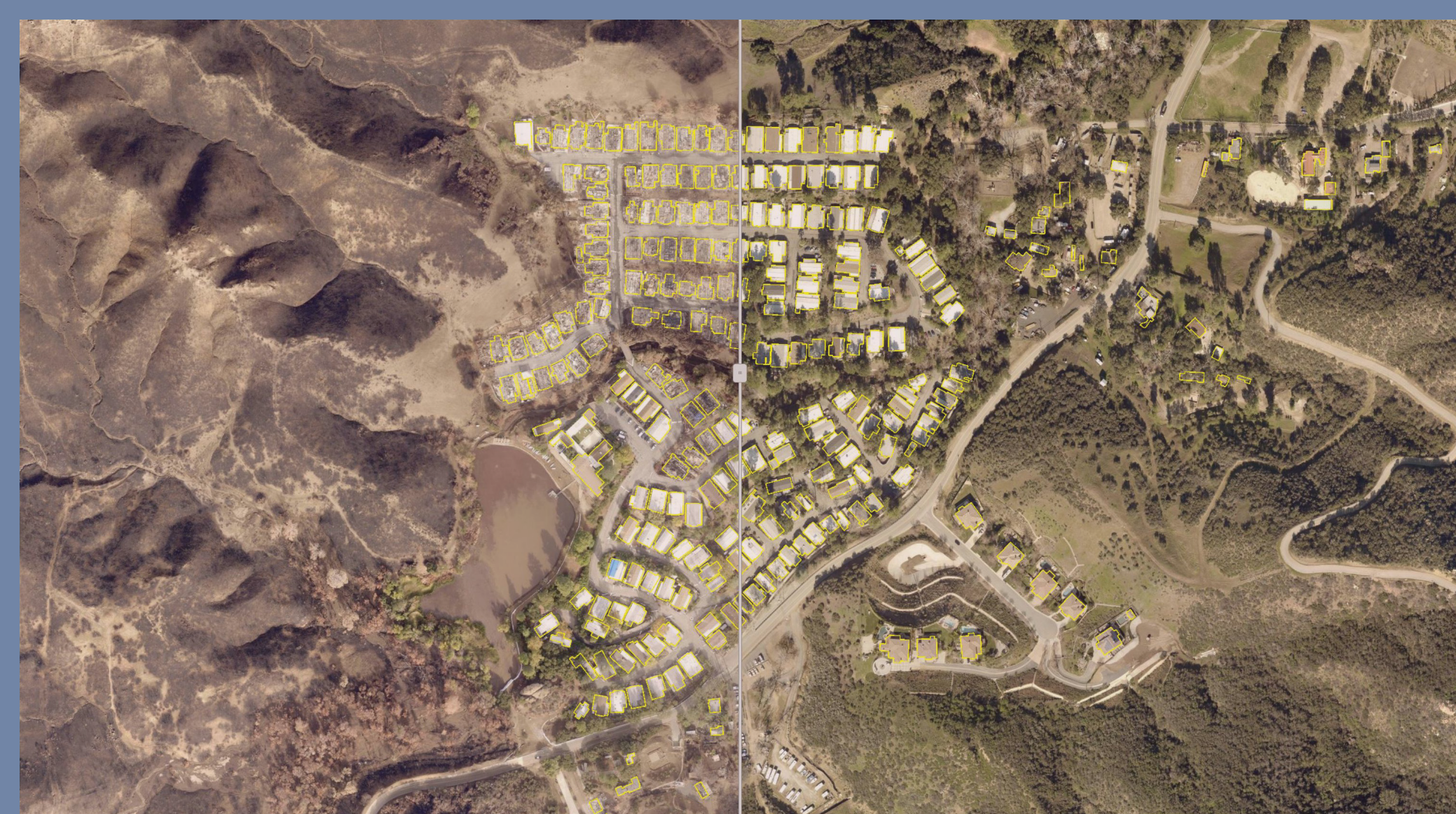
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THEORETICAL STATEMENT

The wildfire management method used for this project is called "From the House Out". By placing emphasis on the designed and built environment, stressing the importance of planning, construction, and appropriate defensible space, a community can improve their resiliency while staying deeply connected to one another. Our communities are most successful when they are adapted to the fire prone environments in which they exist, instead of fighting against them. Landscape architecture is also a tool for people become engaged in actions to plan and protect their neighborhoods from wildfire. Communities in the wildland-urban interface can simultaneously enjoy the benefits of living in the Santa Monica Mountains, while safely accepting wildfire as part of the surrounding natural ecology.

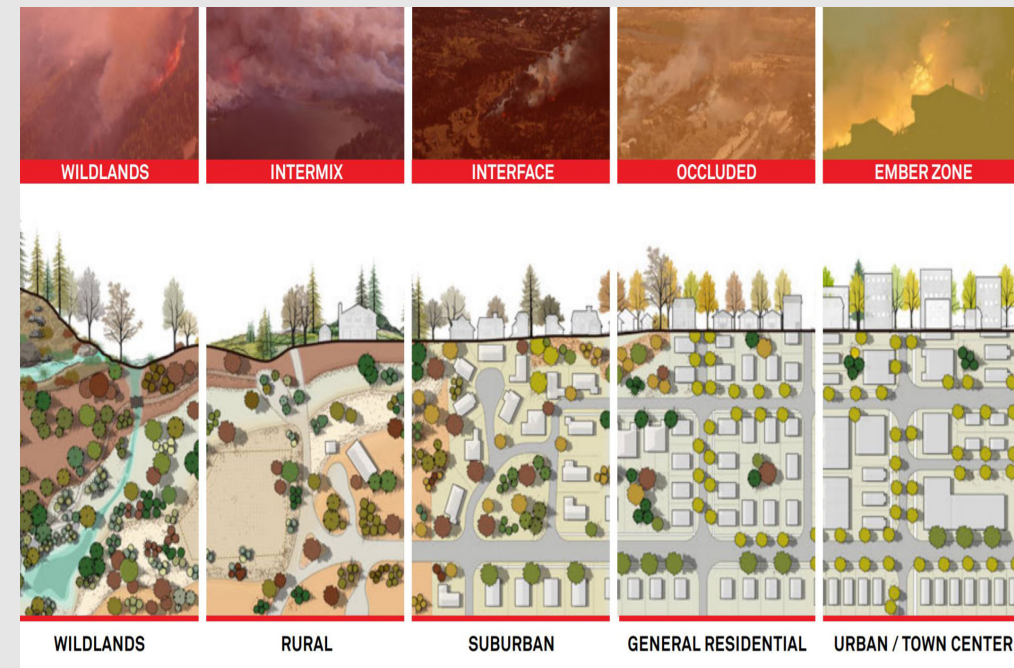


PROJECT STATEMENT

When land, lives, and property are lost due to wildfire, what is the role of landscape architecture in community recovery and planning for the future? By using landscape-based principals and wildfire protection guidelines, this project presents a master plan that aids the Seminole Springs Mobile Home Park in their recovery and success as a fire-adapted community.

PROJECT JUSTIFICATION

DEVELOPMENT IN THE WUI



As development escalates, wildfire management remains the most pressing challenge in the Wildland-Urban Interface.

More people than ever are living within the wildland-urban interface (WUI). As of 2010, more than 4.5 million houses and 11.2 million people exist within the wildland-urban interface, the areas with the greatest risk for wildfire to begin with. Increases in development has a direct correlation with a spike in land, structure, and life loss due to wildfires.

THE CLIMATE CRISIS



California is experiencing the largest and most destructive fires in its history, breaking records every year.

California has many natural fire environments, like the Santa Monica Mountains, where wildfire has a historically critical role in preserving the health of the chaparral ecosystem. Yet due to decades of drought, climate change, pests, and wildfire suppression, the plant material hasn't been burning like it naturally should, resulting in mega-fires like the 2018 Woolsey Fire.

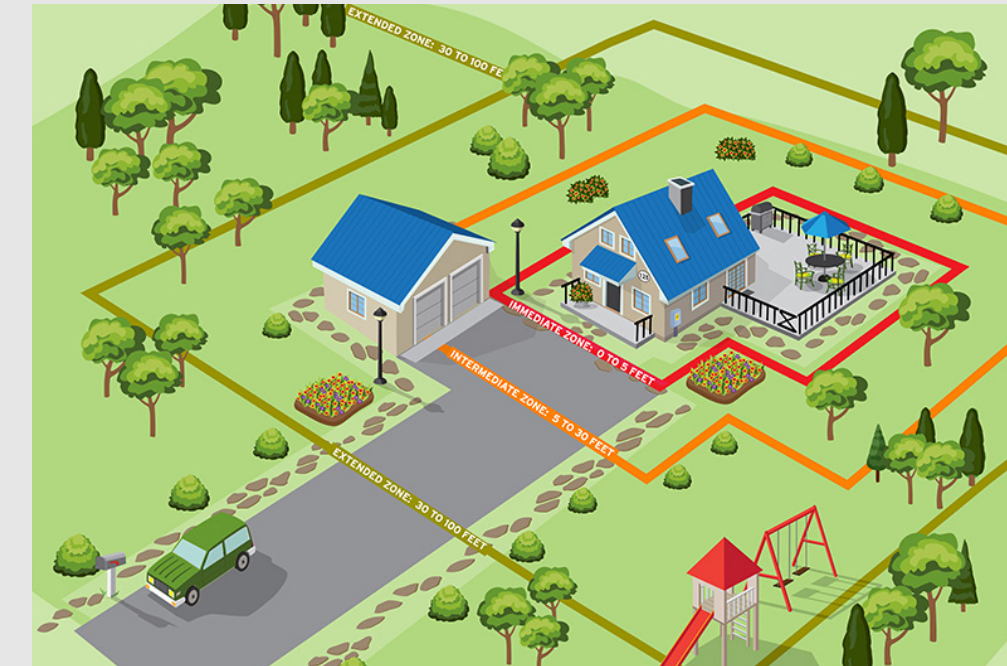
THE WOOLSEY FIRE



The Seminole Springs Mobile Home Park suffered greatly in the Woolsey Fire and still has not recovered.

The Seminole Springs community lost 110 coaches and their entire infrastructure, including streets, storm drains, sewers, gas, and electric lines. The resident-run cooperative community has been struggling to rebuild for over 3 years. Being a co-op was originally an affordable and pleasant way of living within the SMM, but it's now left them struggling for financial assistance as the cost and planning of rebuilding relies all on them.

"FROM THE HOUSE OUT"



There is an opportunity to recover and rebuild as fire-adapted by focusing on landscape architecture.

Landscape architecture is an essential part of the "from the house out" wildfire management model. This places emphasis on the designed and built environment, stressing the importance of planning, construction, and appropriate defensible space. This allows the natural environment to operate with minimal disturbance and permit residents to remain connected to the natural world.

HISTORY OF THE SITE

A HISTORIC RETREAT NESTLED IN THE SANTA MONICA MOUNTAINS...

...AND THE LARGEST WILDFIRE THE AREA HAS EVER SEEN.



1850-1903

Living symbiotically with their environment, **the Chumash people practiced vegetation burning to sustain a landscape of grassland Savannah and scattered oak trees.** In return, this benefitted their resources, increasing plant food yield and improving hunting. It was **purely used as a food production technique, and not a way to control a natural resource.** Since the process of burning would not provide them with resources until a later date, often months away, the practice had a great deal of complexity. The Chumash regularly engaged in this kind of advanced planning.

However, **with the arrival of the Spanish colonization, any burning was suppressed.** As a result, plant groups like chaparral, coastal sage scrub, and non-natives began to dominate the landscape. This marks **a change in the Santa Monica's vegetation that directed relates to human wildfire suppression.**

Likely a formerly enslaved person from Kentucky who migrated to Los Angeles in the late 1850s, **John Ballard became the first African American to own a home in the mountains of Agoura Hills,** in an area then called Newberry Park. He lived at the 160-acre Homestead with his daughter Alice Ballard.

In 1901, **at the age of 30, Alice Ballard was approved for her 160 acre homestead patent of her own.** She married a formerly enslaved man, a Moroccan immigrant, and raised two children on her homestead- **all at the height of the Jim Crow period.**

Yet in 1903, they sold the homestead for \$10 dollars (approve \$300 in 2019 value). The theory is that **a large fire burned through the mountains, possibly destroying the Ballard cabin,** influencing their decision to sell quickly and under-value.

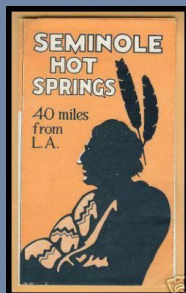
1906-1911

The Ballard's land was subdivided and sold to several new owners. Prospectors drilling for oil on land owned by the Ramera Oil Company **accidentally struck an "artesian well of hot mineral water".** William Simes took over the area, becoming the first private owner. He decided the name Seminole after a play on words from his last name "Simes" and the word "oil" (this later inspired naming the streets within the Mobile Home Park after indigenous tribes).

Around the same time, **Norman Wise, who also bought a piece of Ballard's land, founded the small mountain town of Cornell.** Country store's, small schools, and weekend escapes began to fill the small mountain town with life.

1921-1958

Simes installed hot tubs and cabins, built a dam and storage tanks, and opened the Seminole Hot Springs. He turned his well of hot mineral water into a Los Angeles destination. **On weekends, thousands would drive in from all over to relax in the thermal pools.** Just up the road, people could go picnicking, boating, dancing at Lake Enchanto (now Peter Strauss Ranch). Three miles away, movies were busily being filmed at Malibou Lake and Paramount Ranch. **It was an area for escape and recreation, surrounded by the natural beauty of the Santa Monica's.**

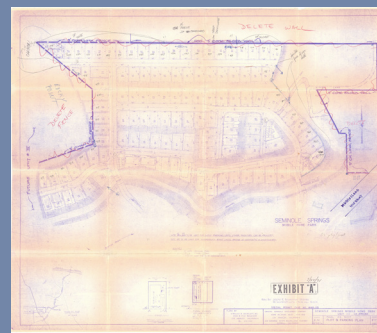


1959

By 1959, the Hot Springs had closed and Simes sold the land to the Seminole Development Company. **The land was graded to make way for a mobile home park.**

1970

Construction plans for the upper portion of the mobile home park



1986

After rent control expired in LA County, the current residents of Seminole Springs Mobile Home Park **form a nonprofit corporation to purchase the 55-acre park for \$4 million.** They are among the first parks in the country to collectivize and become mutually owned.

2010

A 2,000-foot volcanic peak near Cornell is renamed "Ballard Mountain" in honor of pioneer homesteader John Ballard. Before the mountain was renamed, it was known by a racial slur, which started back in the 1880's by neighbors of Ballard's and remained listed that way in country records, until Ballard's descendants requested the name change.

2011-2017

Historically extreme drought period throughout California. Approximately 102 million trees died from the drought, while others were left defenseless against pathogens and pests. **Hundreds of native trees (alders, oaks, sycamores, willows) in the Santa Monica's died during this time.**

2018

On November 8th, 2018, the Woolsey Fire was started by electrical equipment owned by Southern California Edison.

Powerful Santa Ana winds caused the fire to spread rapidly, slowing down aerial support, allowing the fire to quickly cross the 101 freeway. **Firefighters had difficulty navigating the dead-end roads** in the hills, and many frustrated homeowners stayed behind to defend their property. **PCH highway was at a standstill for hours, as it was the only road in or out of many of the mountain communities.** The fire was memorable for destroying several celebrity homes, Paramount Ranch, and forcing evacuations of many people and their animals onto the beach.

One of the hardest hit communities was the Seminole Springs Mobile Home Park, losing 110 out of the 215 homes and their entire infrastructure.

On the same day as the Woolsey Fire, **the Camp Fire in Northern California decimated the town of Paradise, killing 85 people, becoming the most devastating in California's history.** Many firefighters were detained North, causing a "resource draw-down", reducing the ability for remaining firefighters to suppress the record-breaking Woolsey fire.

The Woolsey Fire was not completely contained until November 21, 2018.

1921-1958 HISTORIC SEMINOLE HOT SPRINGS

AN AREA FOR ESCAPE AND RECREATION,
SURROUNDED BY THE NATURAL BEAUTY OF THE SANTA MONICA MOUNTAINS.

SEMINOLE HOT SPRINGS *** In the Beautiful Santa Monica Mountains

IDEAL VACATION SPOT . . .

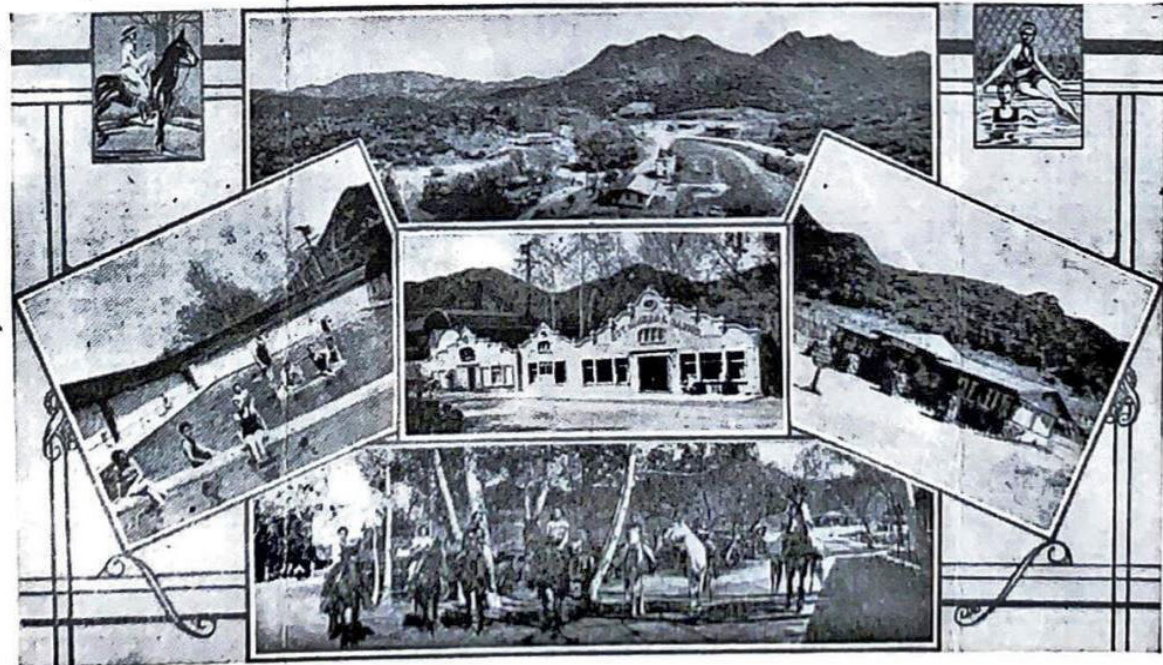
Seminole Hot Springs is open all the year, and is a delightful place to picnic, to spend a Sunday, a week-end or a month. High, dry and cool in summer, and warm in winter, it is fitted by nature to be the greatest health resort in Southern California.

RECREATION . . .

There are mountain trails for hiking and horseback riding; rocky crags to climb, affording thrilling views or distant hills and ocean . . .

The open air plunge of constantly refreshed, naturally warmed mineral water is a most pleasurable and popular year-round swimming pool.

Aside from its delightful sportive facilities, the water has few equals for its curative properties, and is highly endorsed by physicians. A trial dip will explain its popularity. Swim suits for rent.



HOT MINERAL WATER
Temperature 110° F
Hypothetical Form of Combination

Parts per Million		Parts per Million	
Silica	10.00	Potassium Sulphate	.81
Iron Oxide	.60	Sodium Sulphate	50.81
Alumina	.50	Sodium Bicarbonate	637.00
Calcium Bicarbonate	6.11	Sodium Chloride	6.94
Magnesium Bicarbonate	2.10	Ammonium Chloride	2.98

(Gives wonderful relief for rheumatism, stomach, liver and kidney troubles.)

WHERE IT IS . . .

Seminole Hot Springs is located in the beautiful Santa Monica Mountains near Malibu Lake, a little over an hour's drive from Los Angeles, over excellent highways, giving a variety of wonderful trips.

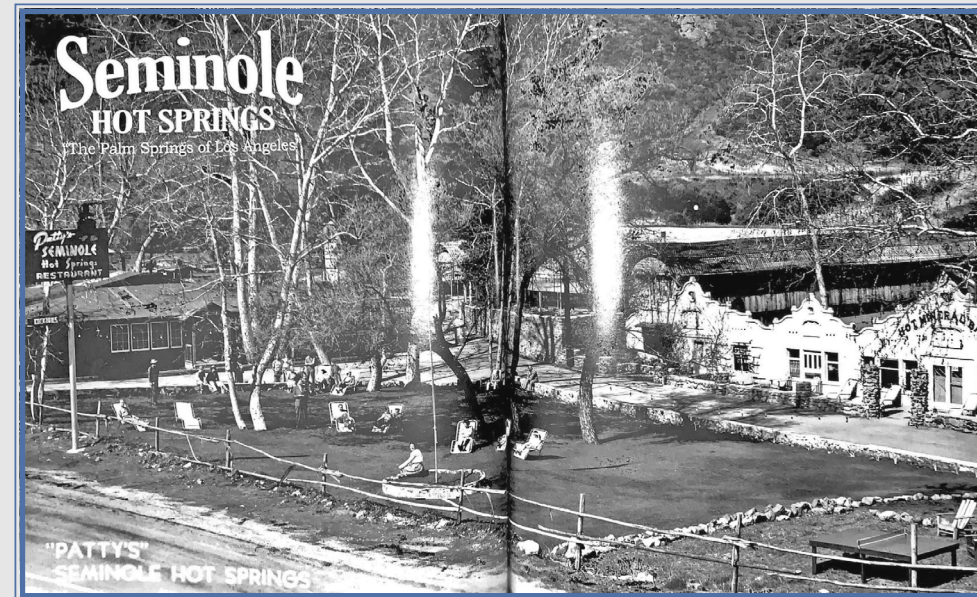
AN HOUR'S DRIVE

Three boulevards make it easy to go and return by different routes. One: Hollywood and Ventura Boulevards to Malibu Lake Junction and to the left six miles. Two: Over beautiful Mulholland Drive to Calabasas. Third: Santa Monica and Coast Highway to Latigo Canyon and to the right 14 miles.

See map on back of this folder.

ACCOMMODATIONS . . .

Cottage and cabins available. Spacious dining room and cafe.



SEMINOLE HOT SPRINGS

RATES

CABINS

1 Person \$ 1.00 to \$ 2.00
 2 Persons 1.50 to 2.50
 2 Persons, per Week..... 10.00 to 14.00
 Meals, A la Carte

AMERICAN PLAN

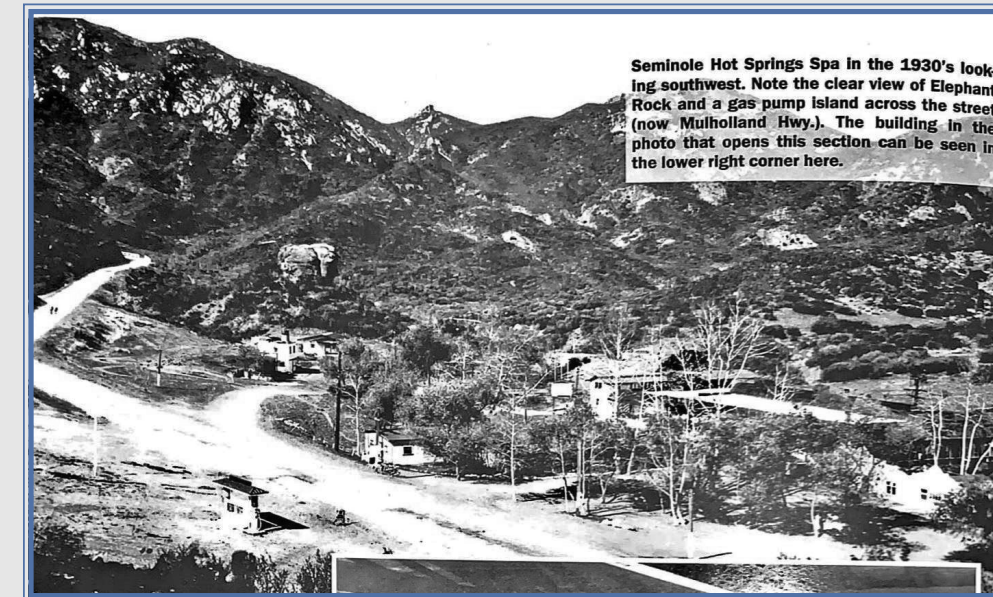
1 Person, per day..... \$ 3.50 to \$ 4.00
 2 Persons, per day..... 6.00 to 7.00
 1 Person, per Week..... 18.00 to 22.00
 2 Persons, per Week..... 35.00 to 40.00

BATHS

Tub Baths \$.50
 Sweat Baths 1.00
 Plunge
 Sweat and Mas

SEMINOLE HOT SPRINGS

40 miles from L.A.



Seminole Hot Springs Spa in the 1930's looking southwest. Note the clear view of Elephant Rock and a gas pump island across the street (now Mulholland Hwy.). The building in the photo that opens this section can be seen in the lower right corner here.

Rooney, Brian. *THREE MAGICAL MILES. An Appreciation of the Past & Present of Malibu Lake & Vicinity.* 1st edition, Cornell Preservation Organization, 2003.

NOVEMBER 2018- THE WOOLSEY FIRE

November 8, 2018- November 21, 2018
Los Angeles & Ventura Counties

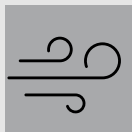
HOW THE WOOLSEY FIRE BECAME SO POWERFUL:



Electrical equipment malfunctions
owned by Southern CA Edison Co.



Record high temperatures
with humidity level as low as 5%



Hot and strong Santa Ana winds
up to 40mph, pushing the fire south



Overgrown and invasive plants
creating "fuel" after a 7-year drought



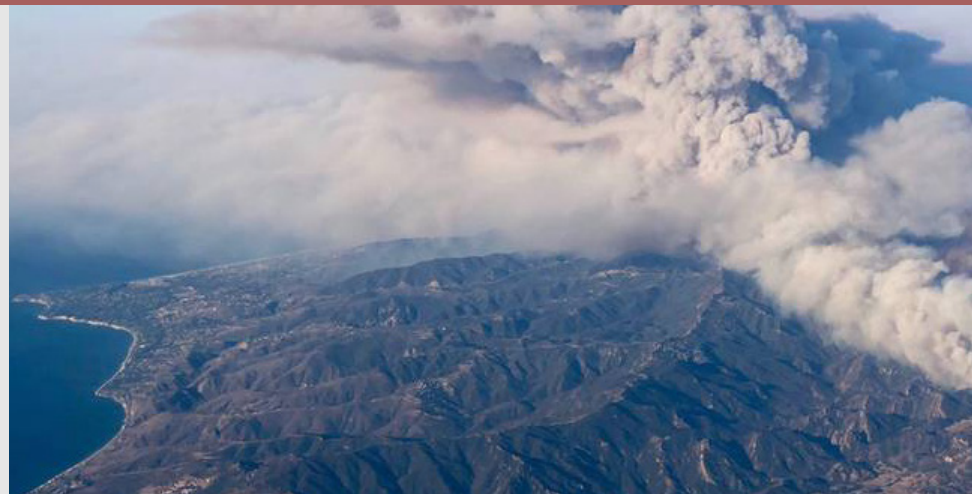
Pests attack weak native plants
normally resistant species succumb to beetles



Older homes and poor street design
easily catch embers and difficult to navigate



Resources stretched thin
3 fires start on the same day, firefighters struggle



3 lives lost
1,643 structures destroyed
3,242 firefighters deployed
96,949 acres burned
295,000 people evacuated
\$6 billion in property damage



FIRE HISTORY

The SMM have experienced over 300 fires since 1900. Most are small and beneficial for the local ecology. The largest fires start when dangerous conditions line up, (low humidity, extended drought, Santa Ana winds), Human activities and human infrastructure are responsible for almost all the wildfire acres burned.

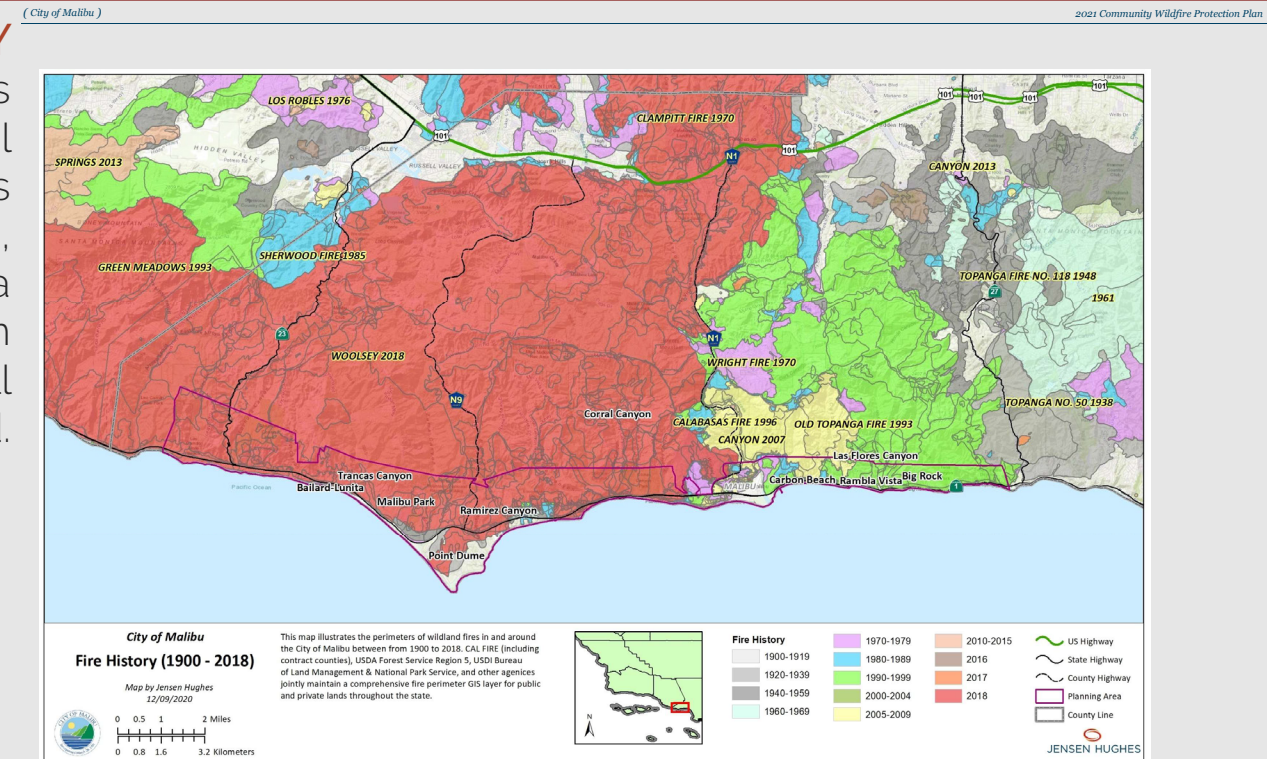
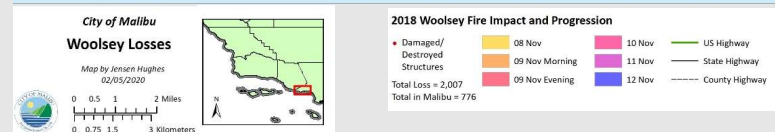
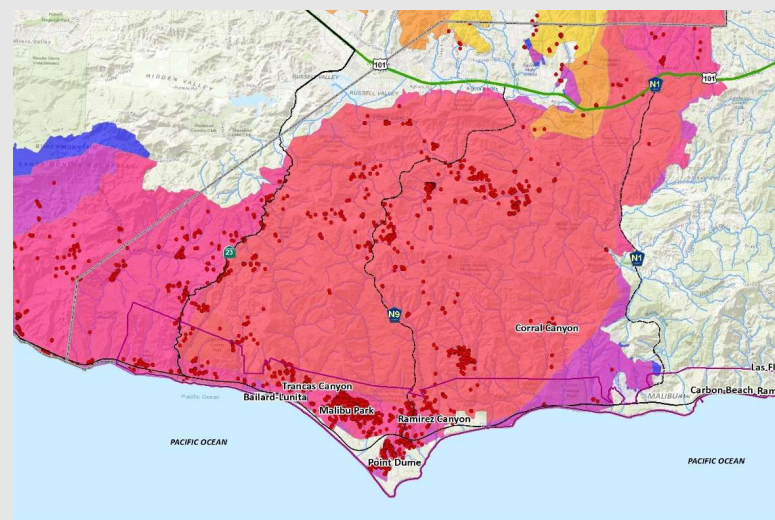


Figure 12. Fire History in the Malibu Area
Page 55 | March 2021 | Rev 0 (DRAFT)



LESSONS LEARNED

After losing their first home to wildfire in 1978, homeowners in Lobo Canyon rebuilt with fire-wise landscaping. They believe these choices saved their home from destruction again in the Woolsey Fire. This kind of homeowner responsibility also protects the lives of firefighters.

WOOLSEY FIRE LOSSES

Many homes throughout the SMM are on one-lane, unmaintained, dead-end roads at the top or bottom of canyons. This is a death-trap for firefighters, who have to make calculated risks on conditions that change quickly.

SEMINOLE SPRINGS DAMAGE FROM THE WOOLSEY FIRE

seminole springs pre-fire 2017



seminole springs post-fire 2018



- **110 out of 215** mobile homes lost
- **Infrastructure destroyed:**
 - Streets
 - Storm drains
 - Water mains
 - Sewer systems
 - Gas + electric lines
- **\$10 million+** in damage to replace
- **Lake contaminated** by sediment ----->



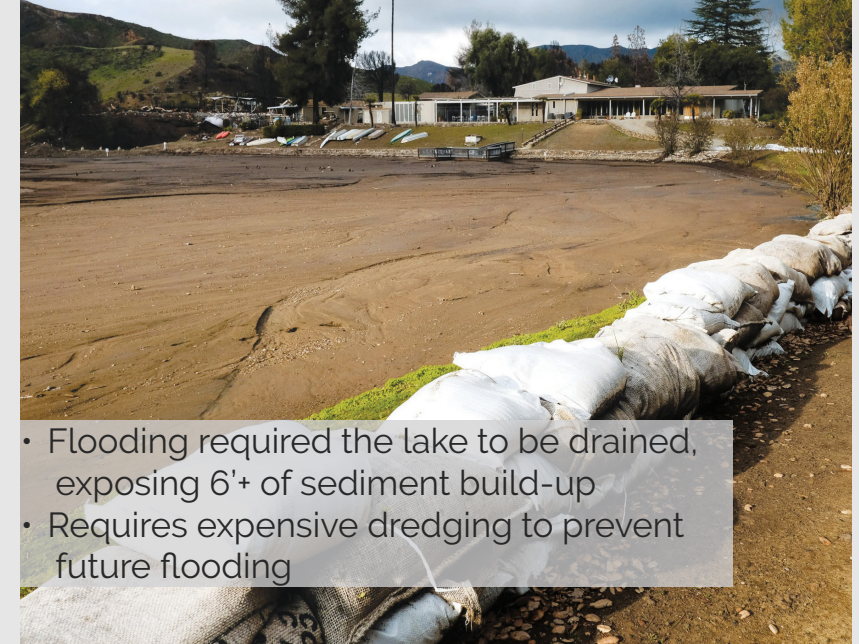
The upper lot of Seminole Springs mobile homes completely destroyed by the Woolsey Fire

The Lake 2016



- Actively used reservoir
- Healthy habitat
- Natural historic creek channels
- Recreational for residents- fishing, boating

The Lake 2020



- Flooding required the lake to be drained, exposing 6'+ of sediment build-up
- Requires expensive dredging to prevent future flooding

GOALS AND OBJECTIVES

THERE ARE COUNTLESS GOALS TO HAVE WHEN DESIGNING WITHIN A FIRE ENVIRONMENT. THESE ARE THE THREE TARGET RESULTS THIS PROJECTS AIMS TO ACHIEVE AND HOW TO ACCOMPLISH THEM.



Photo by environmental and wildfire photographer Stuart Palley

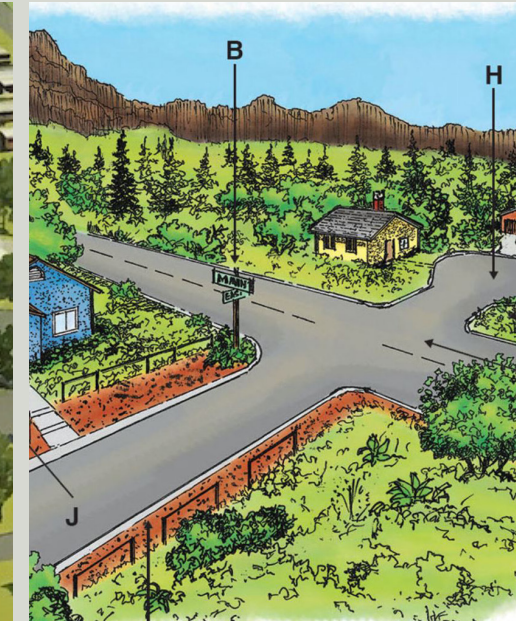


1. IMPROVE WILDFIRE RESILIENCY

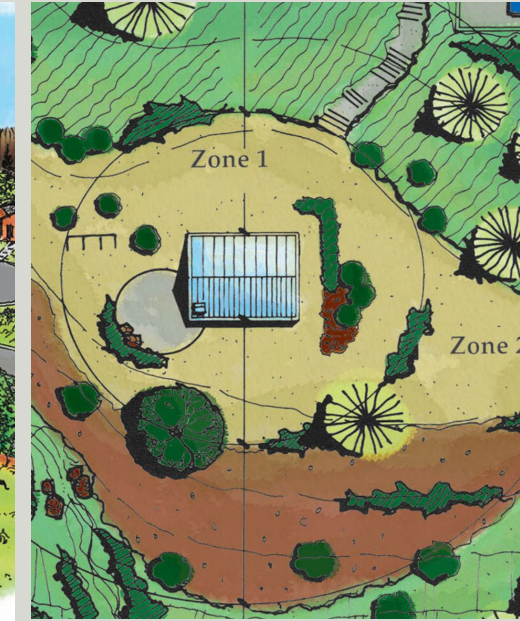
INCREASE RESOURCES AND DECREASE DENSITY WITH NEW PARK LAYOUT



REDUCE MOBILE HOME DENSITY



CREATE SAFE STREET CONNECTIONS



PROVIDE DEFENSIBLE SPACE



UTILIZE ON-SITE RESOURCES

GOALS AND OBJECTIVES CONTINUED



2. KEEP THE COMMUNITY CONNECTED

REMAIN A RESIDENT-OWNED-COMMUNITY WITH A UNIQUE SENSE OF PLACE



EXPLORE REVENUE GENERATION OPPORTUNITIES



PROVIDE A LOW RISE MULTI-UNIT COMPLEX



DETERMINE A CENTRAL GATHERING SPACE



LINK THE SITE TO ITS HISTORY



3. PROTECT AND ENHANCE THE SURROUNDING HABITAT

CREATE SAFE CONNECTIONS TO THE LOCAL CHAPARRAL



USE CALIFORNIA NATIVE / SANTA MONICA MOUNTAINS PLANT MATERIALS



REVIVE THE LAKE HABITAT



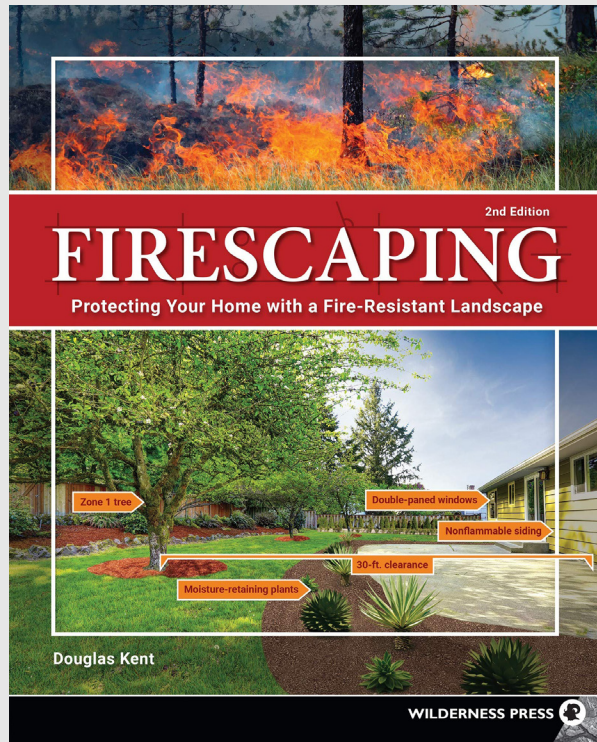
RESTORE LA SIERRA CREEK



CONNECT TO AND DESIGNATE TRAIL HEADS

DESIGN METHODOLOGY

METHODOLOGIES ARE CHOSEN FOR THEIR DESIGN, ECOLOGICAL, AND SOCIAL GUIDELINES THAT ARE RELATED TO WILDFIRE MANAGEMENT WITHIN THE SITE LOCATION.



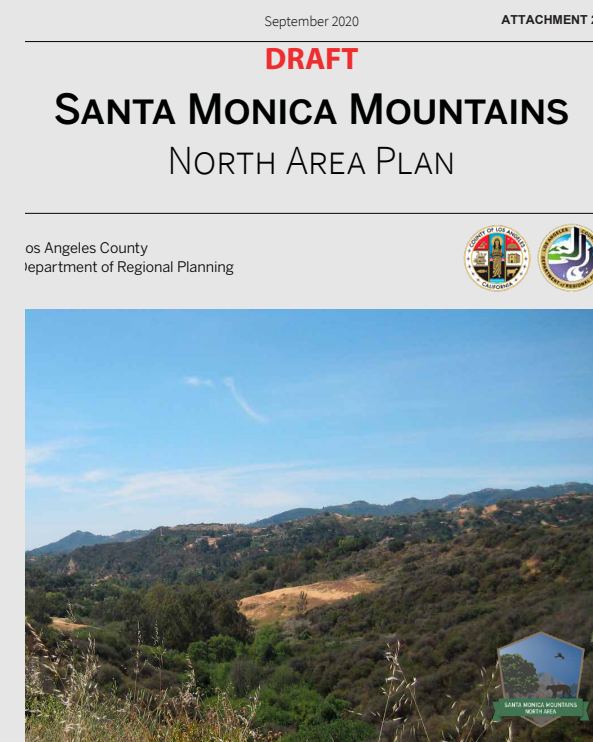
FireScaping: Protecting Your Home with a Fire-Resistant Landscape by Douglas Kent
Guidelines for...

- Road design
- Structures
- Driveways
- Landscape zones & maintenance
- Slopes
- Water systems



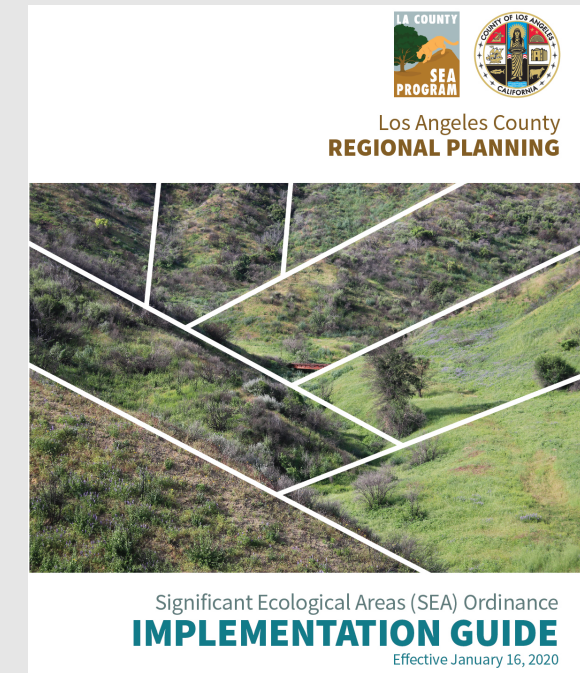
City of Malibu Community Wildfire Protection Plan

- Woolsey fire community response
- Community action plans
- Defensible space strategies



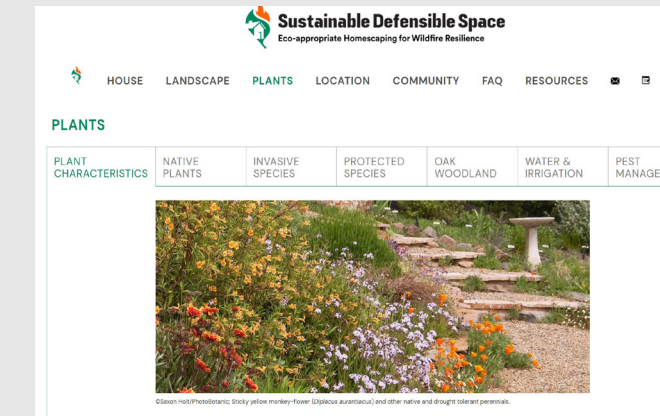
Santa Monica Mountains North Area Plan by Los Angeles County Department of Regional Planning Policies on...

- Open Space
- Biological Resources
- Water Quality
- Tree Protection
- Hillside management
- Scenic routes
- Alternative transportation policies



Significant Ecological Areas Ordinance Implementation Guide by Los Angeles County Department of Regional Planning

- Biodiversity- identify and protect
- Resiliency- guide development within SEAs to maximize preservation
- Public Service- ensure property rights are maintained in the SEAs through clear guidelines while improving quality of life for all who live in LA county.



Sustainable Defensible Space (defensiblespace.org) by Resource Conservation District of the Santa Monica Mountains

- Reduce human ignitions and the frequency of large fires
- Manage the WUI to maintain or re-establish native vegetation
- Improve resistance of structures to wildfire loss by improving management by homeowners of their defensible space zone.



Fire Adapted Communities Graphic & Facilitator's Guide by Fire Adapted Communities Learning Network

- Community engagement
- Wildfire Recovery
- Wildfire Response
- Public Health
- Plans & regulations
- Safety and Evacuation
- Resident & Community Mitigation

PROJECT PRECEDENTS

THREE CASE STUDIES OF COMMUNITIES THAT HAVE FACED SIMILAR WILDFIRE SITUATIONS AND APPROACHED THE PROBLEM BASED ON SIMILAR PRINCIPALS.

THESE PROJECTS WITH RELATED ASPECTS, PROGRAMS, OR GOALS WILL ASSIST IN THE DESIGN METHODOLOGY.



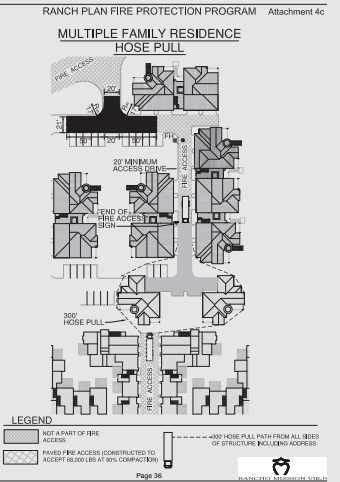
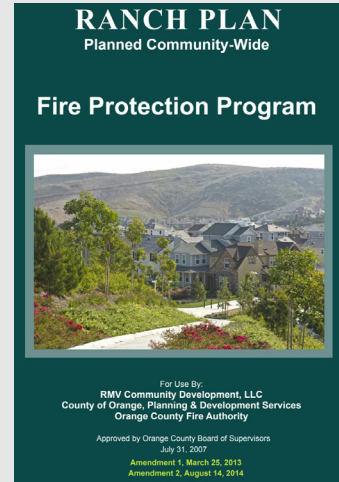
1. RANCHO MISSION VIEJO

- South Orange County, CA
- Land Concern, IMA
- 23,000 acres (25% community, 75% habitat preserve)
- Opened 2013, ongoing project
- Largest planned community in CA



WILDFIRE RESILIENCE IS A CENTRAL COMPONENT TO THE SITE DESIGN

Site layout, building design, landscaping, and marketing have included wildfire risk and assessment from the beginning.

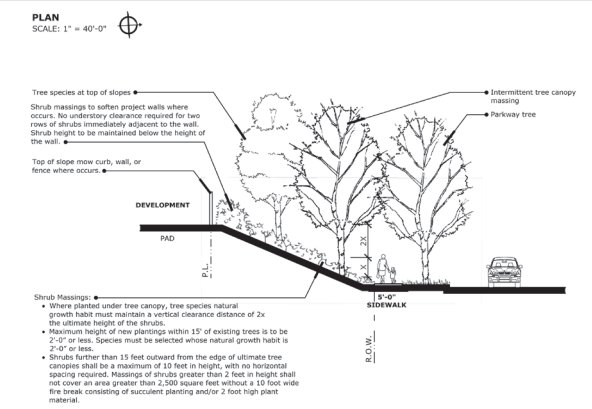


STRICT DEFENSIBLE SPACE PROTOCOLS

Guidelines for landscaping within the WUI ensure a safe perimeter around homes, and that fire-resistant native plants are prioritized.

FIRE PROTECTION PROGRAM

A program of building guidelines was created to communicate how to design along slopes, the width of streets for emergency vehicles, proper wayfinding, etc.



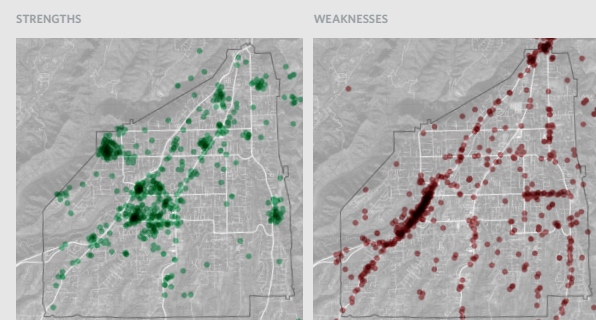
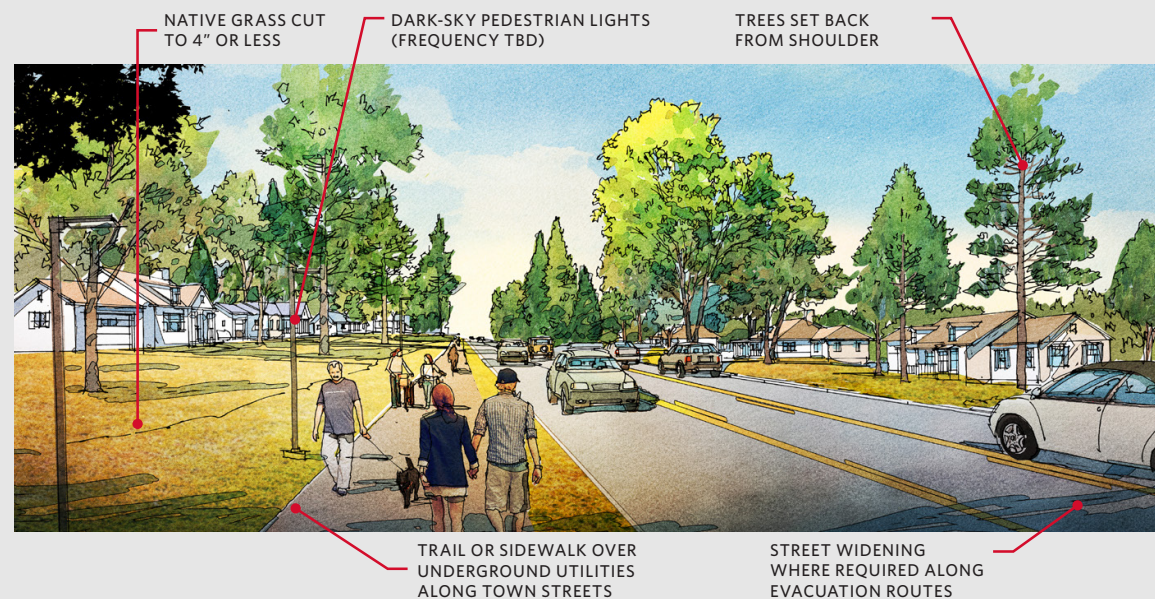
PROJECT PRECEDENTS CONTINUED

2. PARADISE RECOVERY PLAN

- Paradise, California
- Urban Design Associates
- 18.33 sq mi
- Presented 2019, ongoing project

A PLAN BUILT ON RELATIONSHIPS WITH RESIDENTS & STAKEHOLDERS

Helped define the plan's 40 recovery projects, each with a suggested recovery priority, cost estimate, a potential project advocate, and potential funding sources.



DESIGNING FOR THE FUTURE

Plan includes widened roads with a more robust pedestrian and bike system that doubles as secondary access/egress with additional capacity for faster emergency response and resident evacuation.



3. AVIMOR DEVELOPMENT

- Boise, Idaho
- Urban Design Associates
- 35 sq mi
- Opened 2008, ongoing project

SENSITIVE TO THE SURROUNDING VEGETATION

Worked closely with the local fire districts to map and classify vegetation across Avimor's 35,000 acres to model fire risk, also identifying and mitigating impacts to habitat and wildlife in the region.

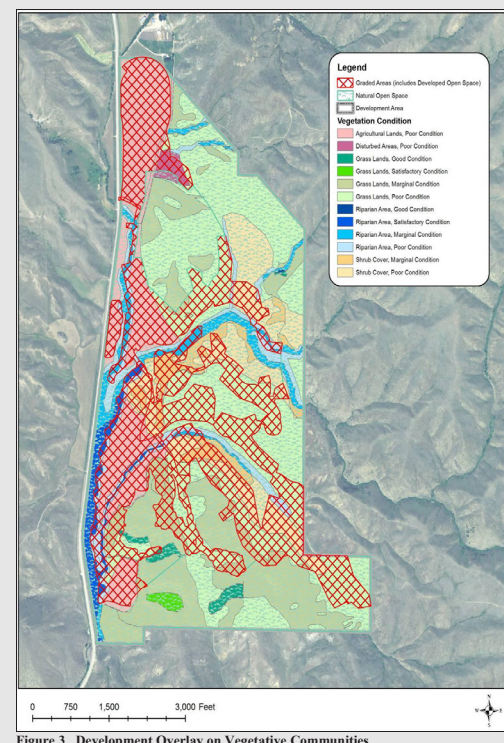


Figure 3. Development Overlay on Vegetative Communities. Avimor Fire and Vegetation Management Plan -Draft Page 7 of 18

NATIONALLY REGISTERED FIREWISE USA COMMUNITY

Developed its own fire plan and codes. Weathered two recent fires—2016 and 2018—directly adjacent to the property, no people or structures were harmed.



Flammable Grasses	Flammable Shrub	Flammable Shrub	Flammable Perennial
Ornamental Grasses Italian Ricegrass (Silver)	Sagebrush Artemisia tridentata	Hedge Juniper Juniperus spp.	Russian Sage Perovskia atriplicata
Other flammable grass Feather Reed Grass Switch Grass Fountain Grass Big Bluestem Great Basin Wildrice	High oil content Drought tolerant 3-5' tall	High resin content Medium water needs 4-6' tall	High resin content Medium water needs 3-5' tall
Alternative Firewise Grasses	Alternative Firewise Shrub	Alternative Firewise Shrub	Alternative Firewise Perennial
Sheep Fescue Festuca ovina	Saltbush Atriplex canescens	Buckley's Quill Mockorange Phacelia x hybrid Buckley's Quill	Walker's Low Catmint Nepeta x fasciosa Walker's Low
Bluebonnet Wheatgrass Buffalograss Canada Bluegrass Crested Wheatgrass Kentucky Bluegrass	High salt content Drought tolerant 4-6' tall	High soap content Drought tolerant 4-5' tall, 10" wide	Low resin content Drought tolerant 2' tall
Flammable Grasses	Flammable Shrub	Flammable Shrub	
Ornamental Grasses (Silver)	Juniper Juniperus spp.	Creeper Juniper Juniperus horizontalis	The flammability chart below illustrates different types of plants and their relative fire resistance.
other flammable grass Maiden Grass Little Bluestem Needle & Thread Sand Dropseed	High resin content Medium water needs Variable height	High resin content Medium water needs 1' tall, creeping shrub	Succulents - More Fire Resistant Turf Grasses Annuals Perennials Shrubs Deciduous Trees Ornamental Grasses Conifers - Less Fire Resistant
Alternative Firewise Grasses	Alternative Firewise Shrub	Alternative Firewise Shrub	
Blue Grama Bouteloua gracilis	Ron Williams Fineline Buckthorn Rhamnus frangula Ron Williams	Autumn Amber Sumac Rhus trilobata Autumn Amber	
Idaho Fescue Crested Red Fescue Sandberg Bluegrass Zoysiagrass	Medium soap content Medium water needs 5-7' tall	High moisture content Drought tolerant 1' tall, creeping shrub	

FIREWISE USA SPECIALIST APPROVED RESIDENTIAL LANDSCAPES

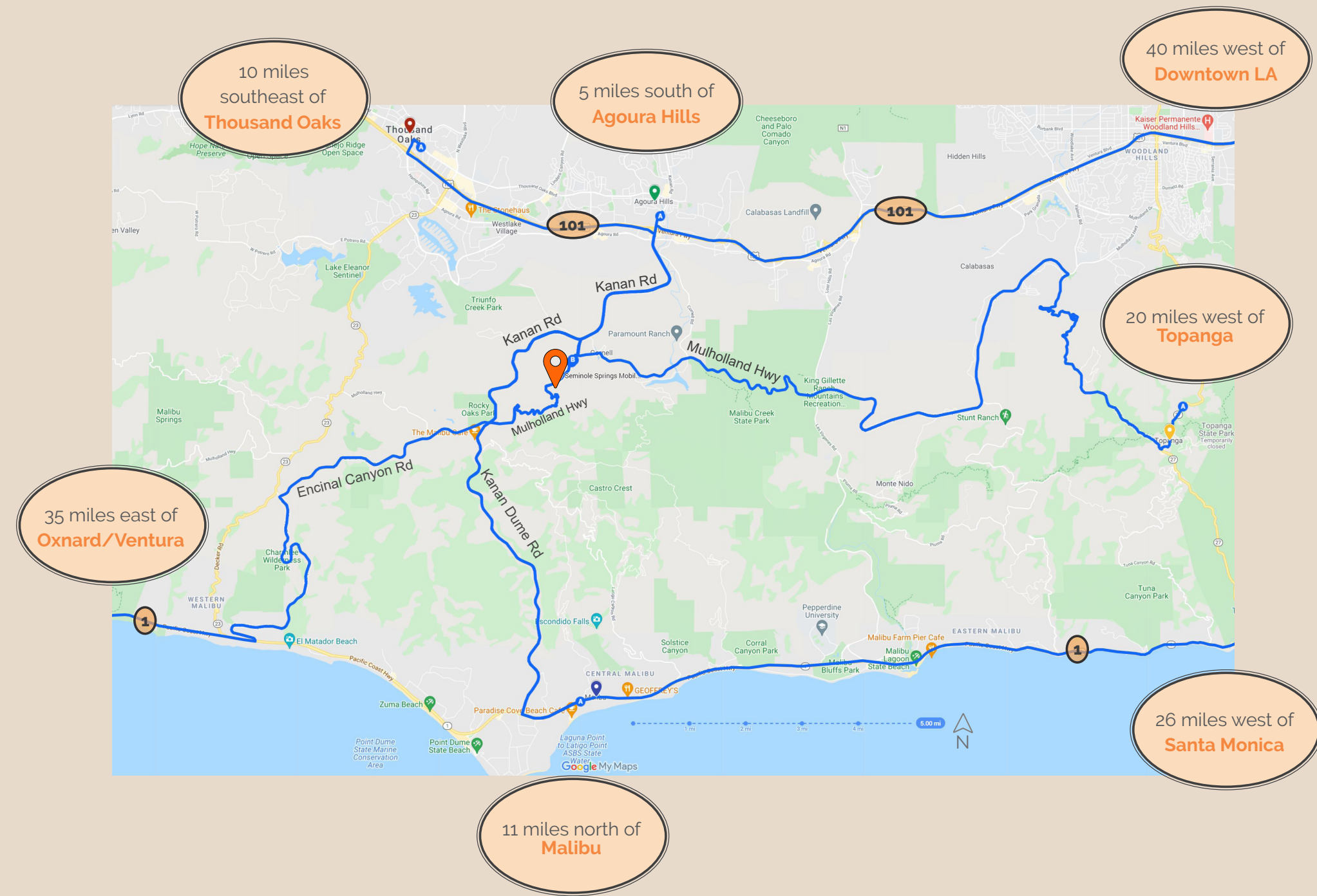
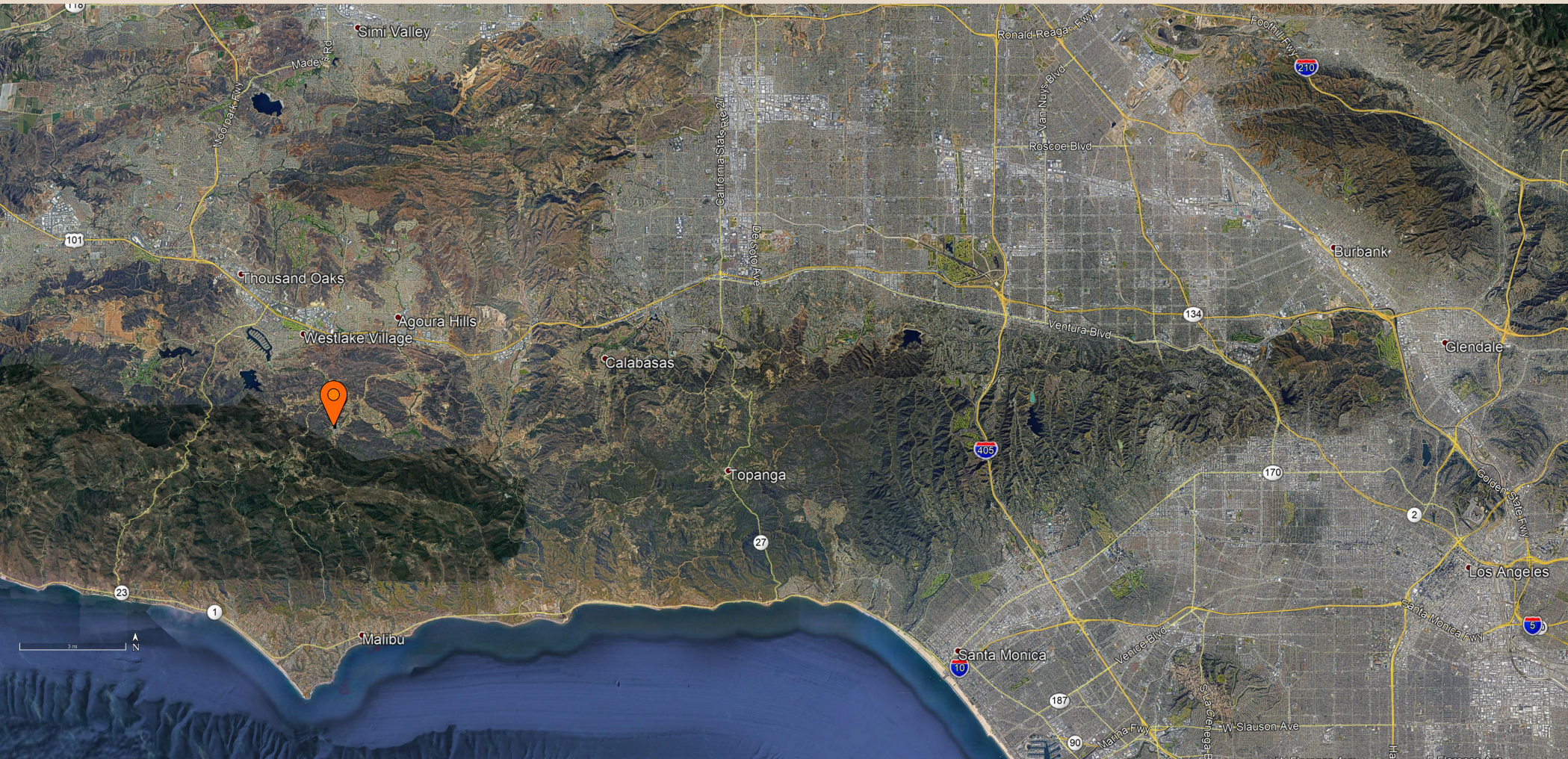
Specialists go over Firewise aspects of the home & landscape plan, with a follow-up audit every five years. Tenants pay \$10 monthly fire impact fee to help offset the costs of improving and maintaining nearby wildlands.

SITE LOCATION











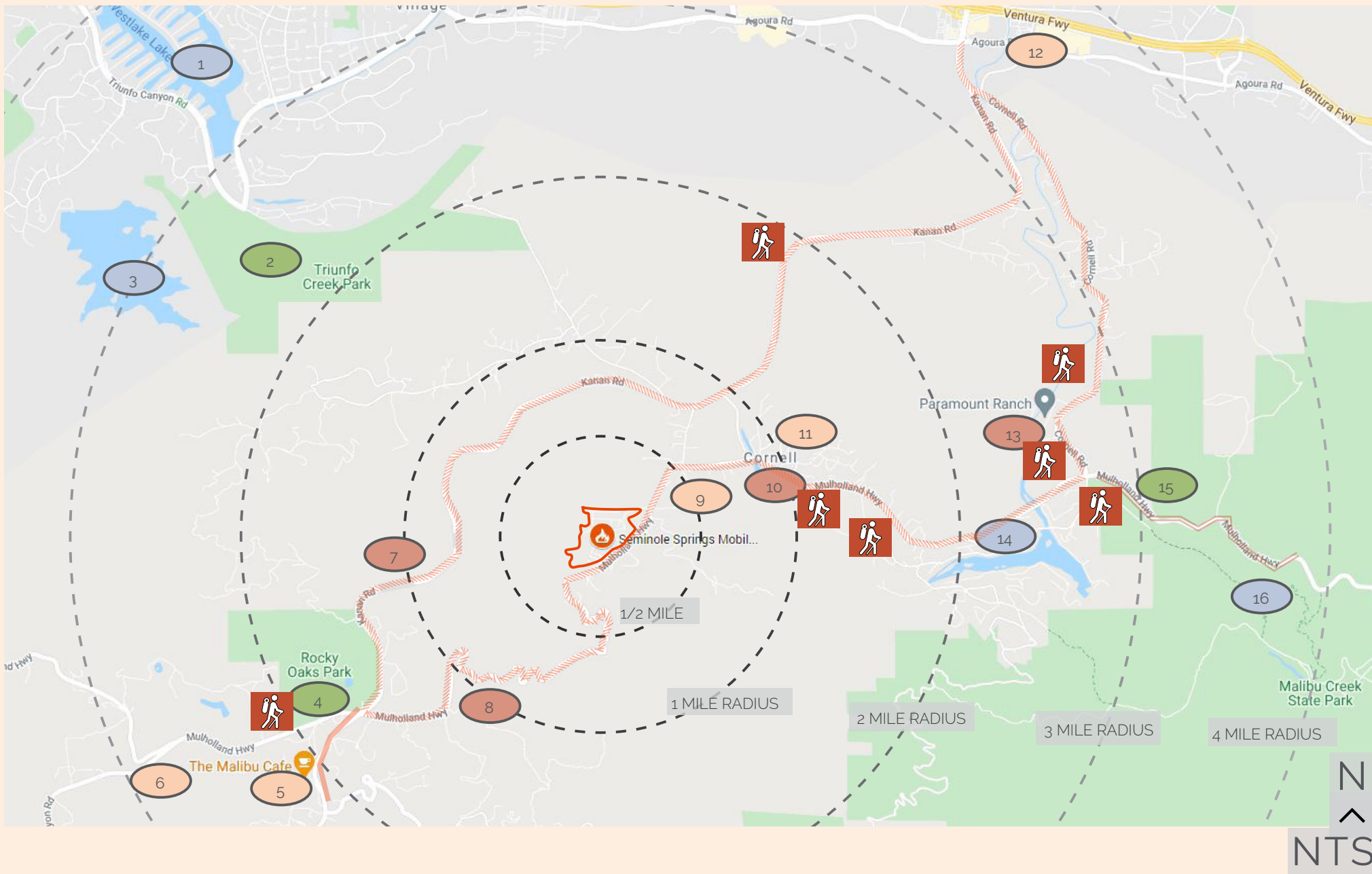
SEMINOLE SPRINGS MOBILE HOME PARK
30473 MULHOLLAND HWY
AGOURA HILLS, CA 91301
UNINCORPORATED SANTA MONICA MOUNTAINS

3 PARCELS: 2058-010-006 , 2058-009-008 , 2058-009-009
ACRES 45.0 total
FIRE: Los Angeles County Fire Department - Station 65
WATER: Las Virgenes Municipal Water District



SITE ADJACENCIES

-  water bodies
-  open space
-  food/entertainment
-  scenic/historical
-  Trailhead
-  Project Site
-  State-Designated County Scenic Highway
-  Proposed Scenic Route by SMMNAP



1. Westlake Lake



2. Triunfo Canyon Park



3. Las Virgenes Reservoir



4. Rocky Oaks Park



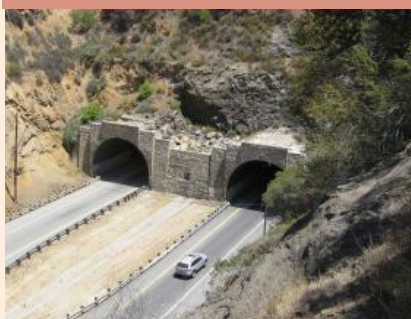
5. The Malibu Cafe



6. Saddlerock Ranch



7. Kanan Dume Tunnels



8. Seminole Overlook



9. The Rock Store



10. Peter Stauss Ranch



11. The Old Place



12. Fast Food/Gas



13. Paramount Ranch



14. Lake Malibou



15. Raegan Ranch

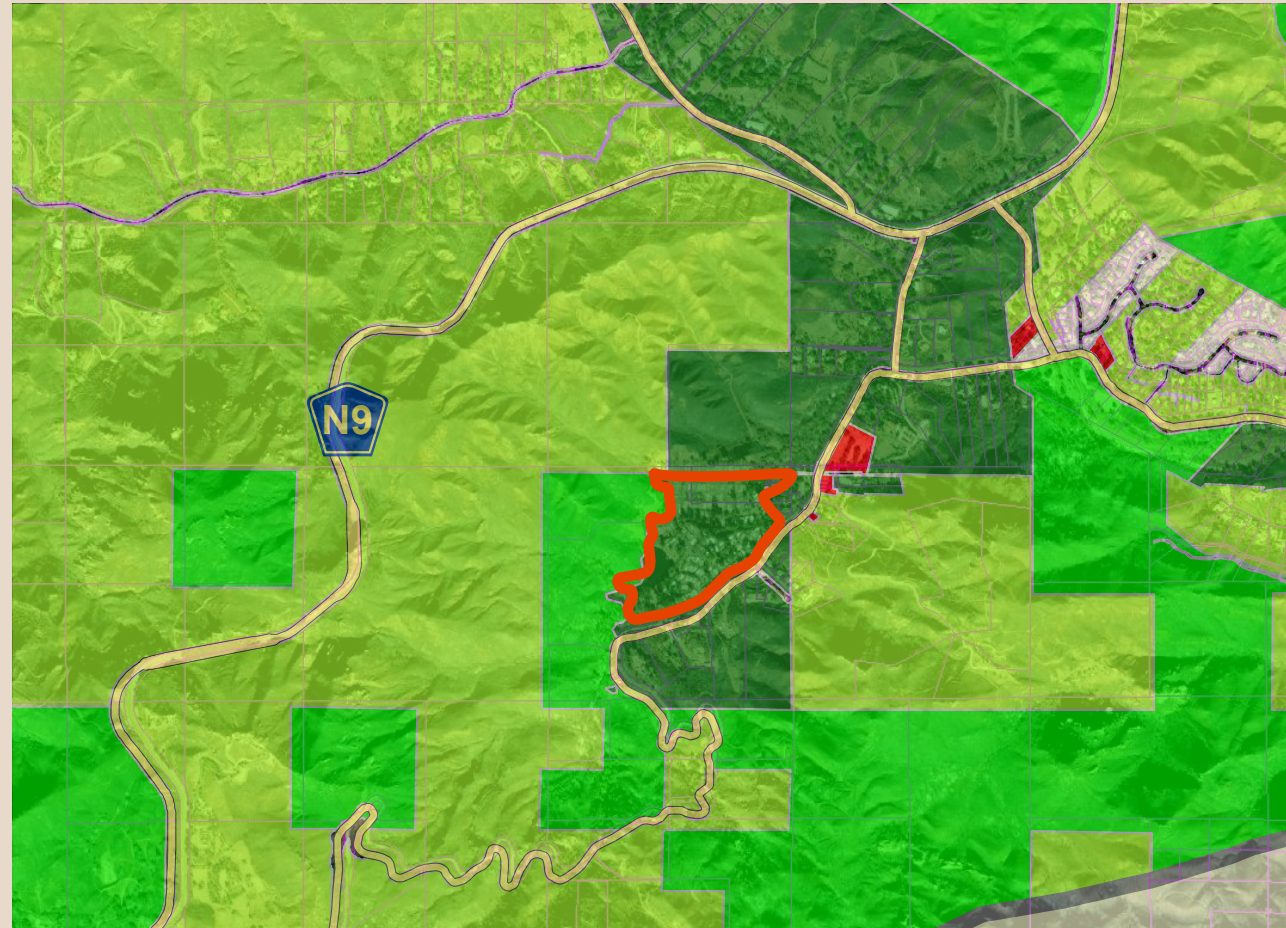



16. Malibu Creek State Park



ADJACENCIES- ZONING & LAND USE


ZONING USE



 Seminole Springs Mobile Home Park- Zone R-R

 **R-R - Resort & Recreation**


- includes:
- mix of residential, commercial, business, recreation
 - equestrian centers/ranches

 **O-S - Open Space**

- includes:
- Publicly owned land
 - Tree People Land Trust

 **A-1 - Light Agriculture**

- includes:
- Privately owned land
 - Trust and land conservatories

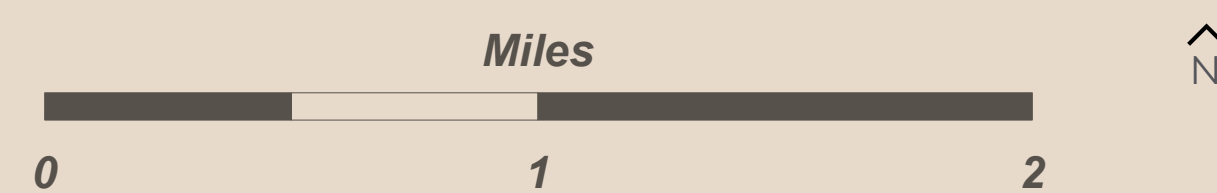
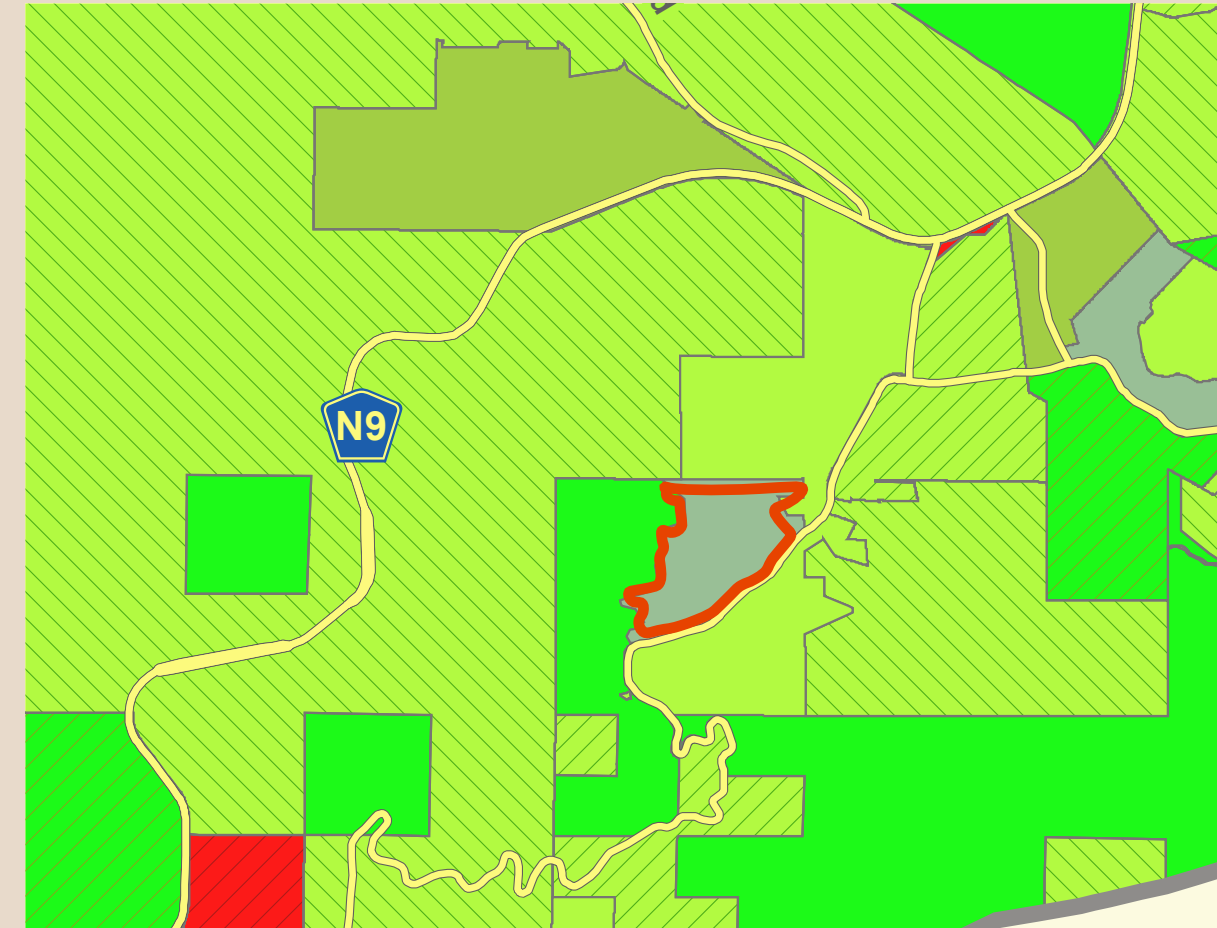
 **C-2 - Neighborhood Business**

- includes:
- Retail or commercial services serving a certain size community


 **R-1 - Single-Family Residence**


- includes:
- Single-family homes

LAND USE





 Seminole Springs Mobile Home Park- R1

 **R1- Rural Land 1**

 **RL2- Rural Land 2 (1 du/2 ac max)**

 **RL5- Rural Land 5 (1 du/5 ac max)**

 **R10- Rural Land 10 (1 du/10 ac max)**

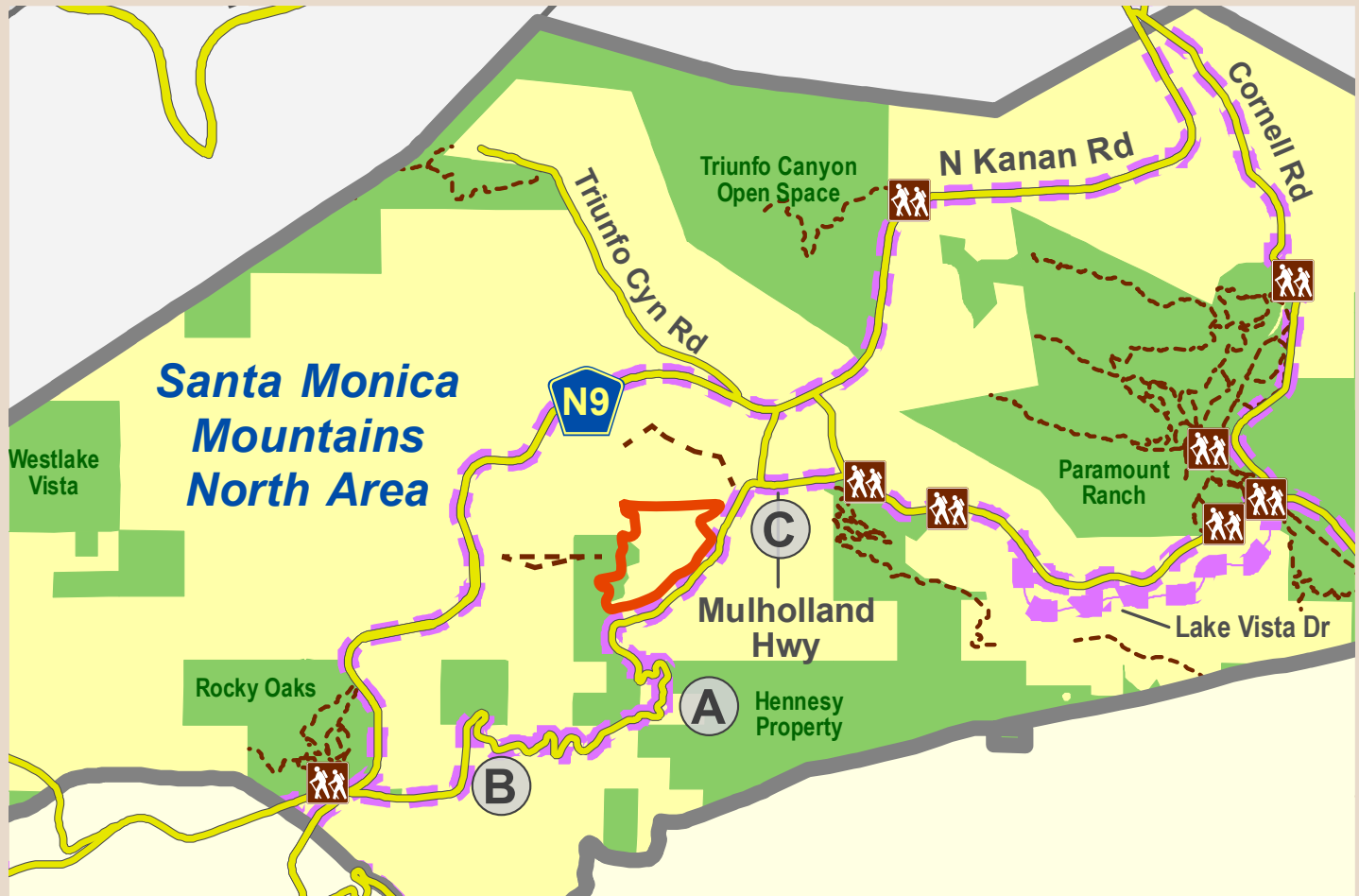
 **R20- Rural Land 20 (1 du/20 ac max)**








 **OS-C- Open Space Conservation**

- Tree People Land Trust
- Santa Monica Mountains Conservancy

 **CR- Commercial Recreation- Ltd Intensity**

ADJACENCIES- RECREATION



-  **Seminole Springs Mobile Home Park**
-  **Trail Head***
-  **Trail***
-  **Backbone Trail***
-  **Class II - Bike Path (Existing)****
-  **Class II - Bike Path (Proposed)****
-  **Class III - Bike Path (Proposed)****
-  **Parkland and Open Space*****

The site is located along Mulholland Hwy, a popular road for driving enthusiasts, motorcyclists, and bicyclists. Going from Topanga to Malibu, it's a very scenic and winding road through the Santa Monica Mountains. One of the few stopping points along this stretch for drivers and riders is The Rock Store.



A "The Snake" driving road winds through the mountains, to Seminole Overlook



B

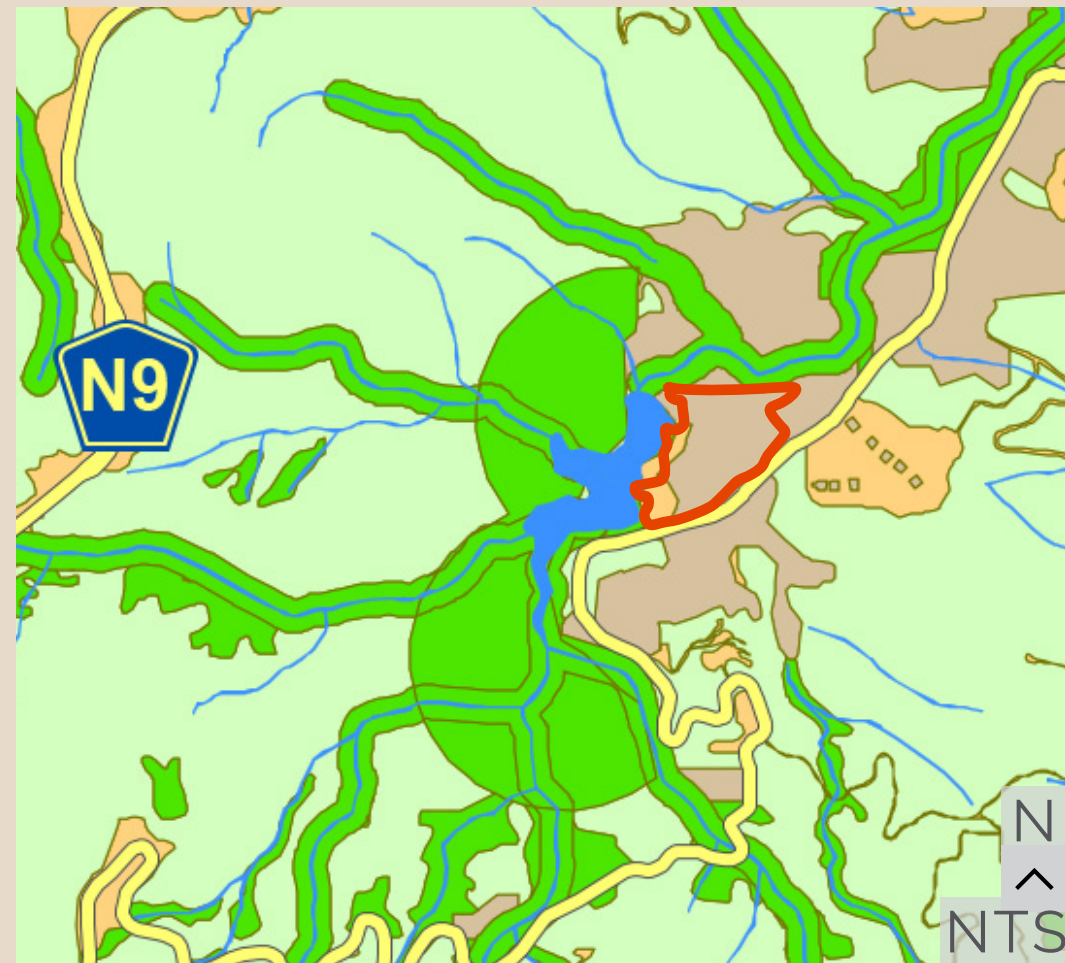


C The Rock Store for a pit stop

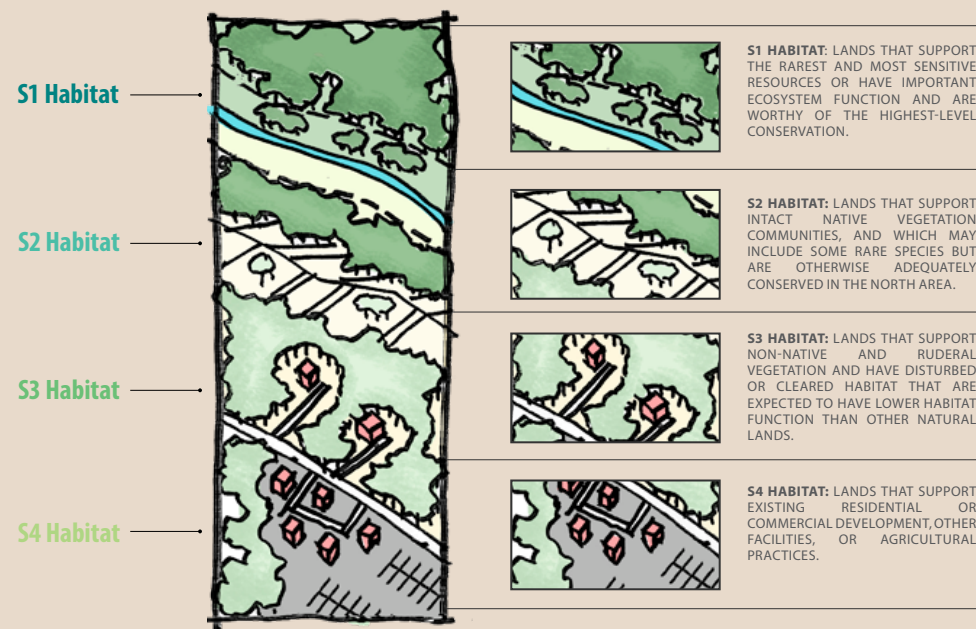


Popular for bicyclists

SITE INVENTORY- VEGETATION & ECOLOGY



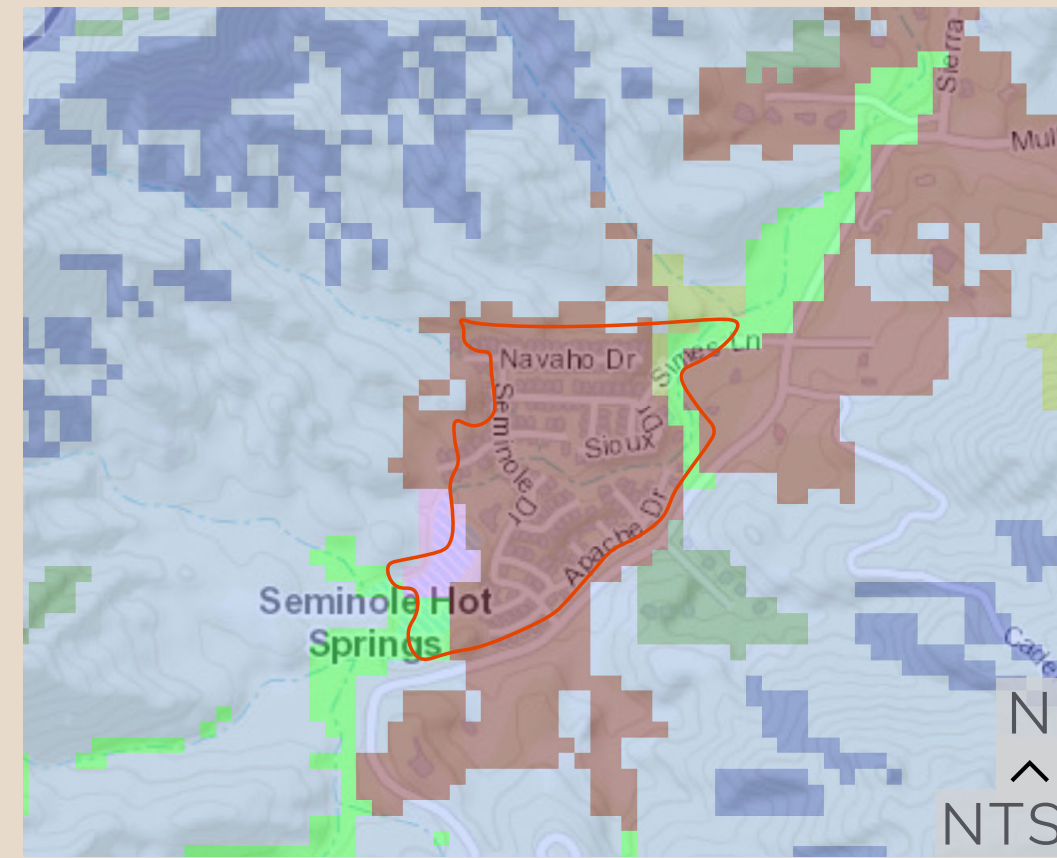
- Biological Resources**
- Water Body (from National Wetlands Inventory)
 - Vegetation Sensitivity - S1
 - Vegetation Sensitivity - S2
 - Vegetation Sensitivity - S3
 - Vegetation Sensitivity - S4
- Base Layers**
- Major Road
 - Highway
 - Freeway
 - Other Unincorporated Area
 - Incorporated City



The Santa Monica Mountains has more than 50 threatened or endangered plants and animals - among the highest concentrations of such rare species in the United States.



75% of the vegetation in the Santa Monica Mountains is chaparral and coastal sage scrub shrublands.



- Mixed Chaparral
- Coastal Scrub
- Coastal Oak Woodland
- Valley Foothill Riparian
- Emergent Wetland
- Urban/ Developed

Chaparral:

- deep-rooted
- drought and fire-adapted
- evergreen shrubs
- growing on coarse-textured soils
- limited water holding capacity
- vegetative wall of stiff stems and leathery leaves
- 4'-12' tall plants
- reproduce after fire either by seeds or stump-sprouting



USERS/CLIENT DESCRIPTIONS

SITE USERS



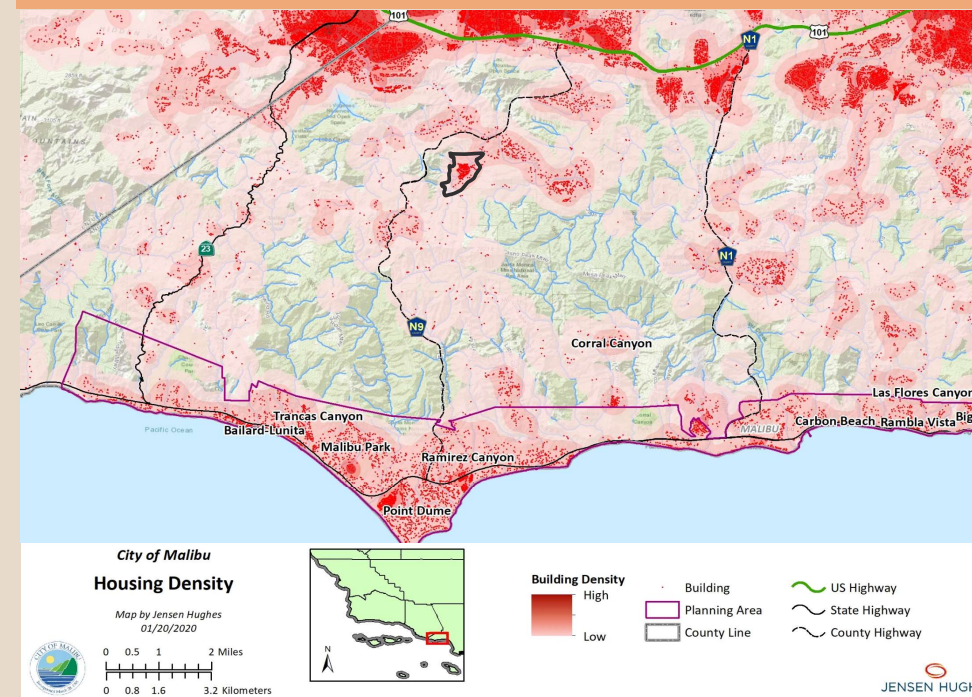
POTENTIAL STAKEHOLDERS + PARTNERS

- Rebuilding Seminole Foundation
- Habitat for Humanity of Greater Los Angeles
- Los Angeles Region Community Recovery Organization
- LA Region Long Term Recovery Group
- Santa Monica Mountains Recreation Authority
- Malibu Foundation
- Tree People
- Mountains Restoration Trust
- Town of Cornell
- Fire Safe Councils

THE UNINCORPORATED SANTA MONICA MOUNTAINS

- 8,929 population
- 89.29 sq miles
- 35 median age
- 82.6% White
- \$132,997 median household income
- 56.4% have a 4-year degree
- 2.5 people per household

Approximately 400 residents in Seminole Springs; 4x the average per square mile for the Santa Monica Mountains



LIVING IN A RESIDENT OWNED COMMUNITY

In a resident-owned community (ROC), homeowners form a non-profit business called a cooperative.

Each household is a Member of the cooperative, which owns the land and manages the business that is the community.

Members continue to own their own homes individually and an equal share of the land beneath the entire neighborhood.

THE DIFFERENCES BETWEEN A ROC PARK AND A PRIVATELY OWNED PARK:

ROC

- Owned and run by residents with an equal share
- Residents own the unit AND the land underneath
- Sense of security with ownership of property
- Monthly fees 400-460
- Waiting for the co-op to decide what to do, community decision
- Lower fees lead to lower funding reserve
- Slow to rebuild after fire

PRIVATE

- Owned and run by a private entity or corporation
- Residents only own the unit
- Lack of security-owners can sell the land at any point
- Monthly fees 1000-2000
- Corporation can make decisions quickly without input from residents
- Higher fees helps with higher funding reserve
- Potentially fast rebuild after fire

Residents of the Mobile Home Park

Returning residents after fire

New residents

Seniors/retirees

Families with children

An estimated 27% of residents want to return after the fire

Locals within the SMM community

Neighbors within 1-3 miles

Hikers, exercisers, horseback

Fishing, boating

Bikers, cyclists, drivers

100 people per square mile living in the SMM

Tourists Weekend Escapers

Los Angeles residents

Out of state

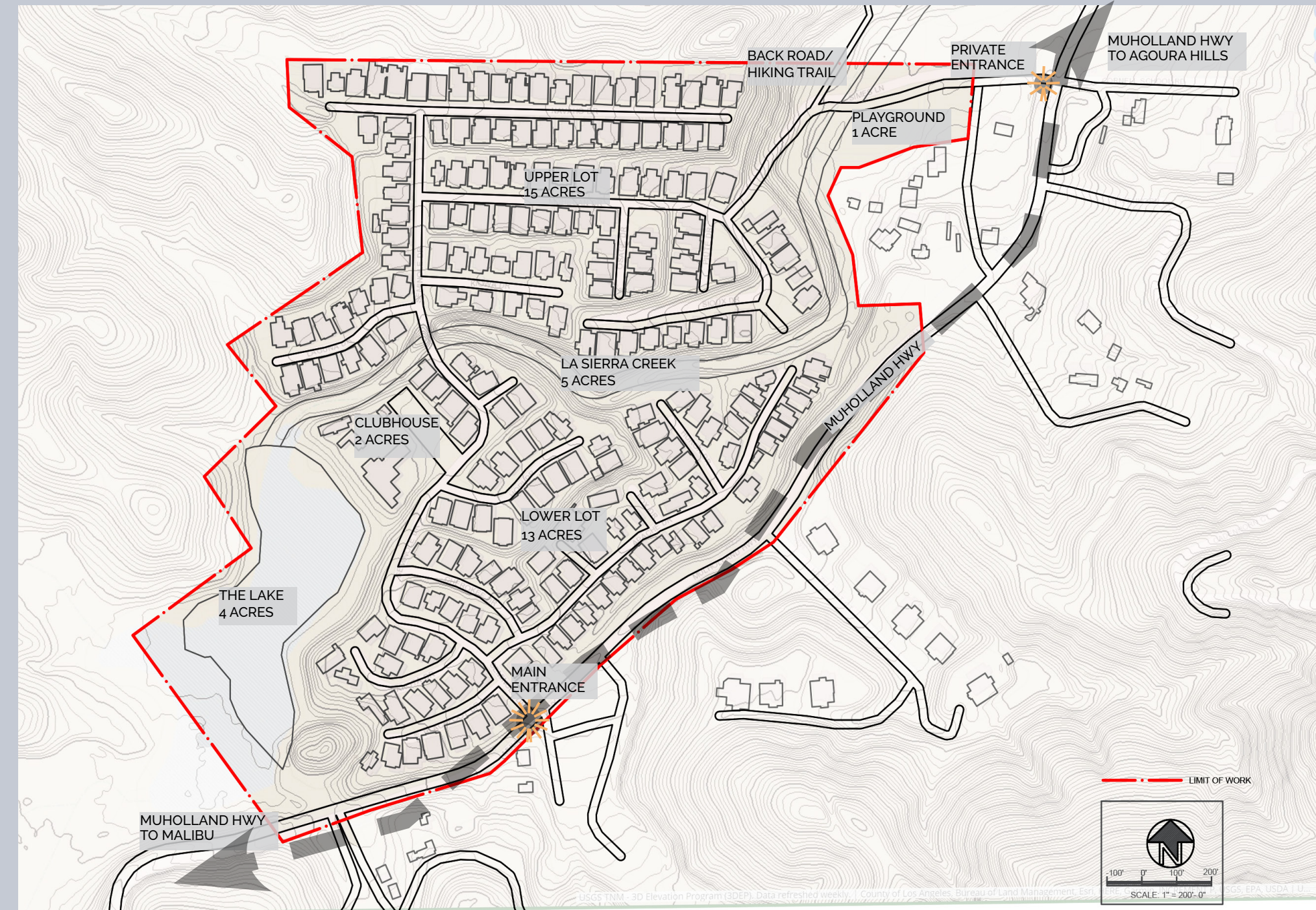
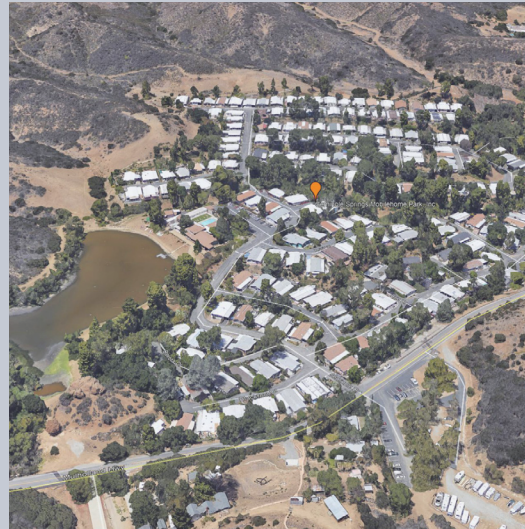
Touring scenic spots

Touring historic spots

700,000 visitors to Santa Monica Mountains in 2020

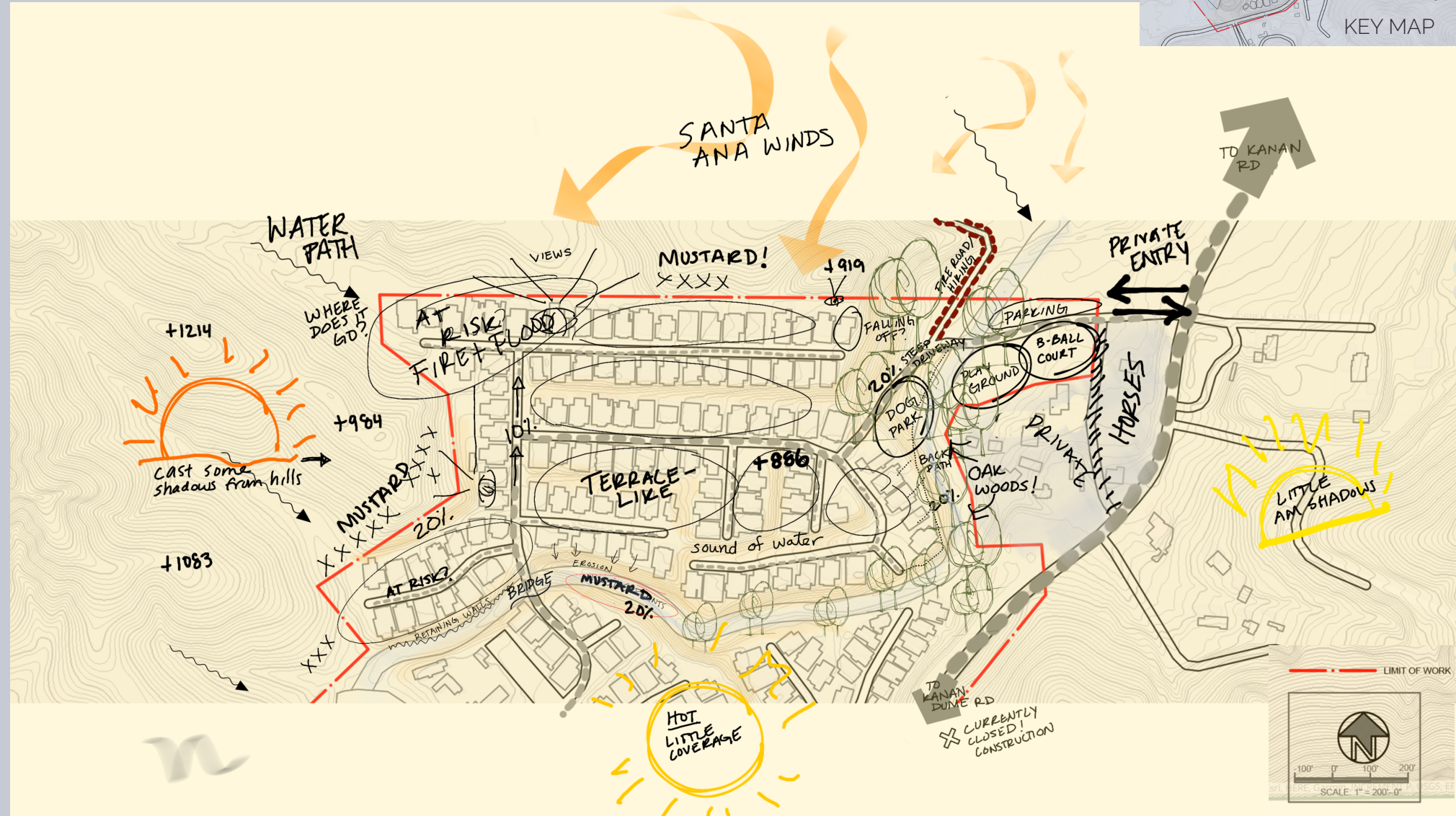
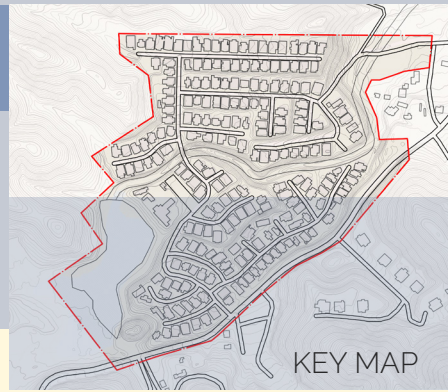
BASE MAP- BEFORE THE WOOLSEY FIRE

45 acres,
215 mobile
home coaches



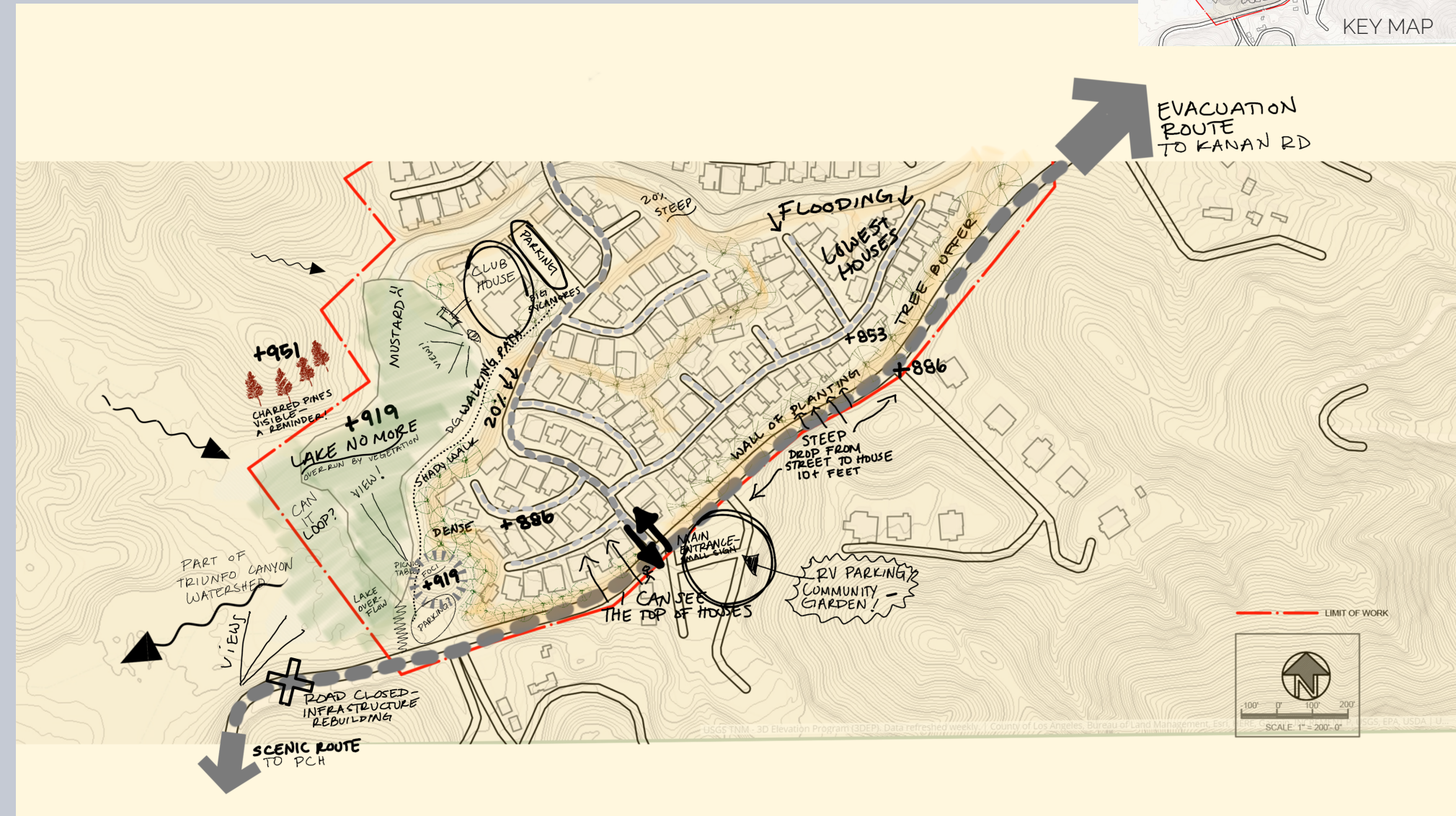
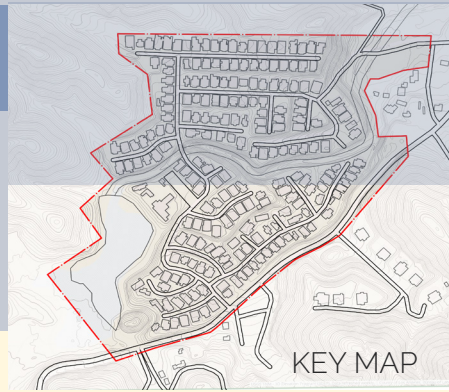
SITE ANALYSIS- NORTH AREA

The northern portion (the upper lot) of the site is the closest to the wildlands, and has the highest risk for wildfire damage.



SITE ANALYSIS- SOUTH AREA

The southern portion (the lower lot) of the site has drastic topography changes from Mulholland Hwy to the Lake.



SITE PHOTOS



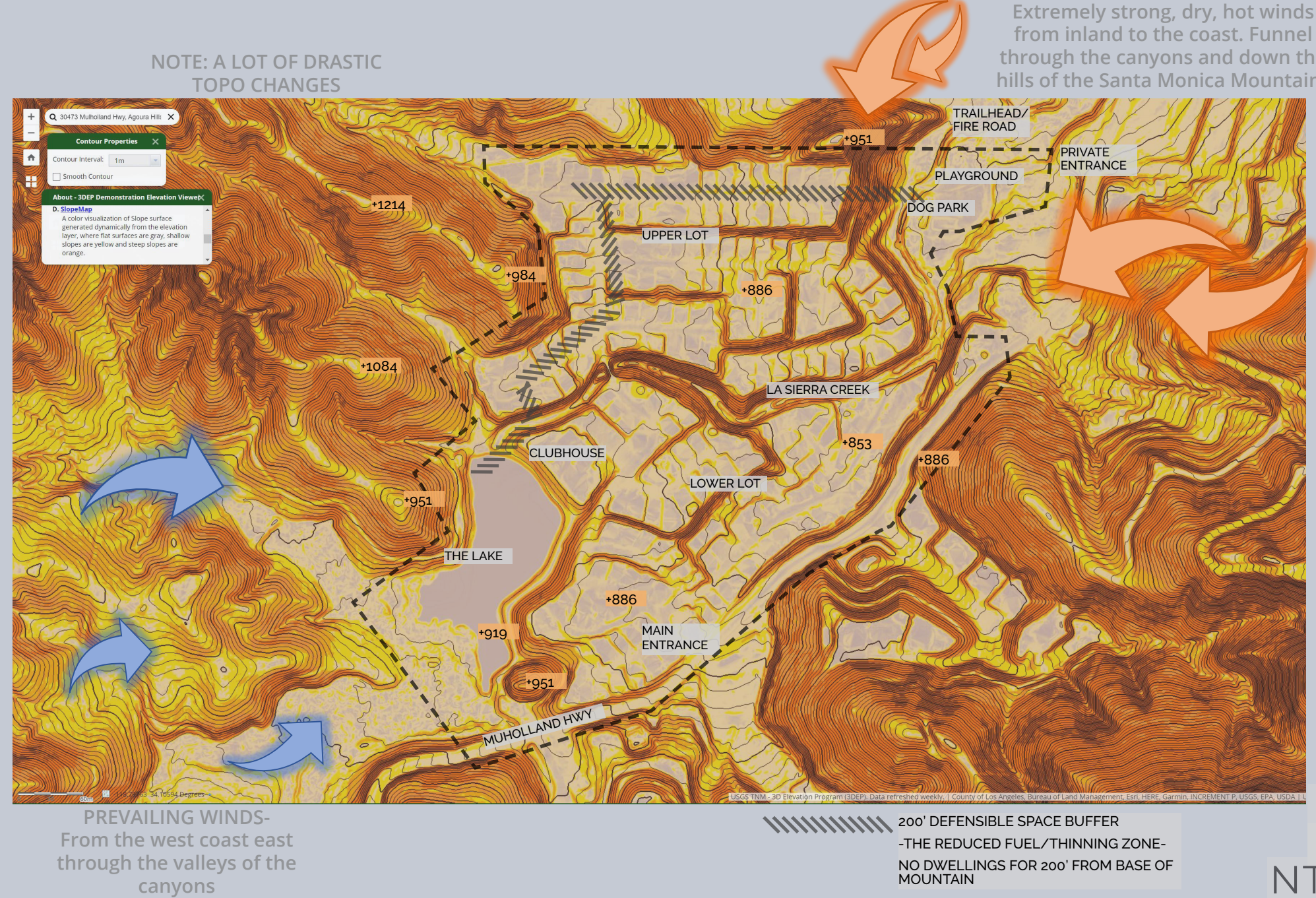
SITE ANALYSIS- CIRCULATION

When analyzing the park circulation, I used an base image from right after the fire, to see how circulation and building damage are related.



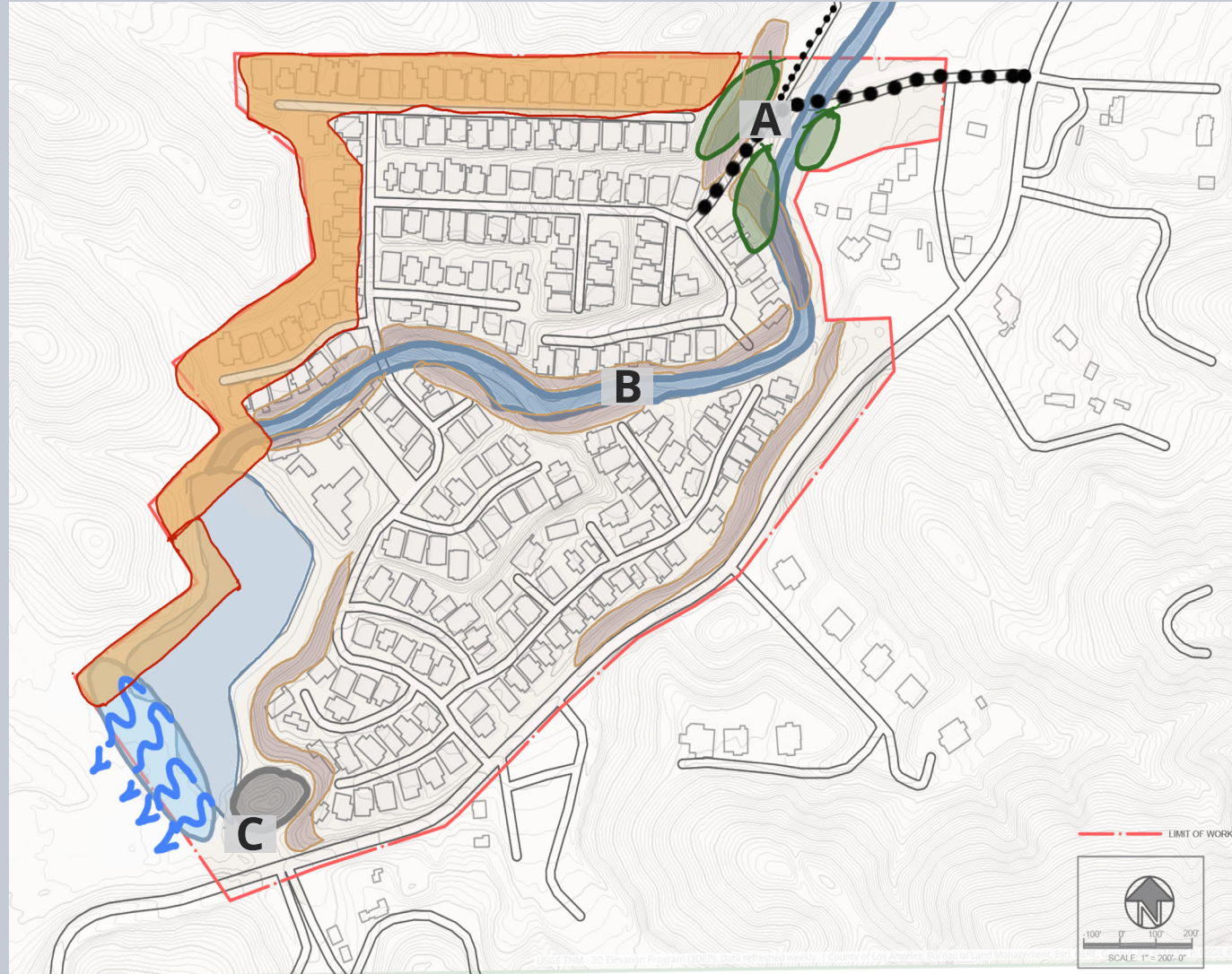
SITE ANALYSIS- TOPOGRAPHY & WIND

It was important to analyze how the site is situated in its topography, and how the wind travels through the site. These are two key components in our most recent wildfires.



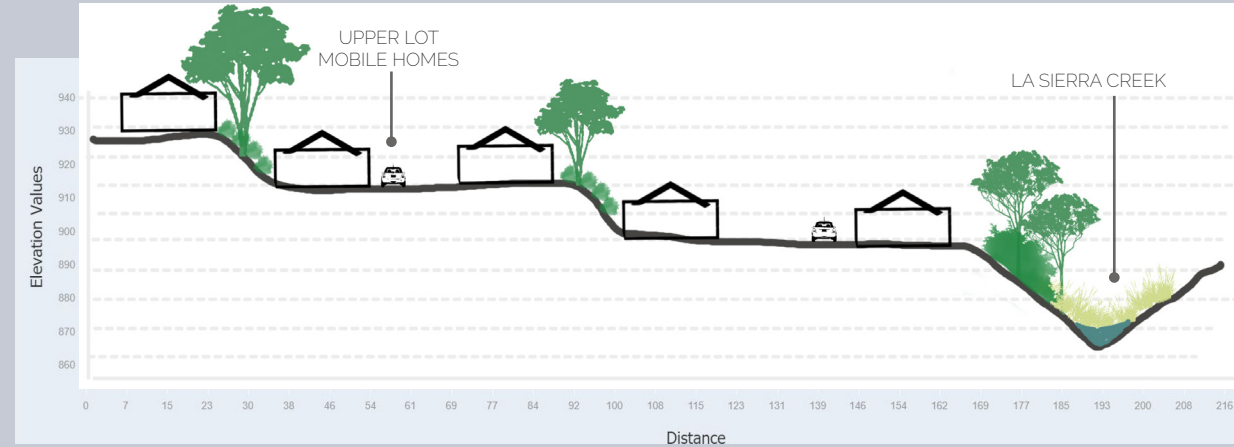
SITE CONSTRAINTS

The site constraints relate directly to its topography, historic water channels, and existing vegetation.



- 200' DEFENSIBLE SPACE BUFFER- NO BUILDINGS
- LA SIERRA CREEK & THE LAKE HISTORIC FLOOD CHANNELS
- STEEP EDGES AND BANKS
- EXISTING MATURE OAK WOODLAND
- ELEPHANT ROCK
- SECONDARY ENTRANCE
- BACK ROAD
- NATURAL FLOOD WATER FLOW

EXISTING SECTION-ELEVATION STUDY



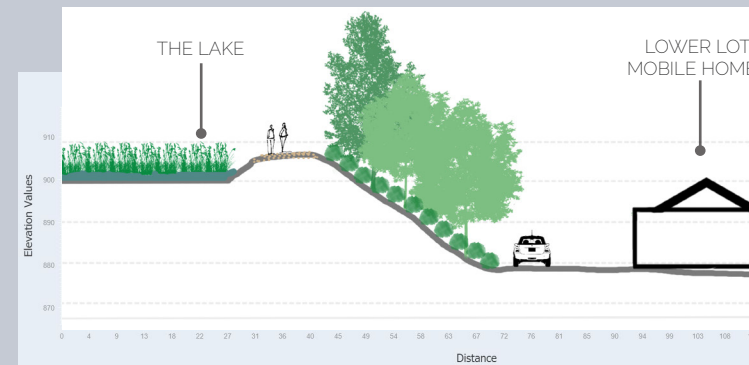
SECTION ELEVATION A-A

CONSTRAINTS

- Creek is a flood hazard
- No homes 200' from the foot of the hill

OPPORTUNITIES:

- Safe streets for emergency vehicles
- Creek and habitat restoration



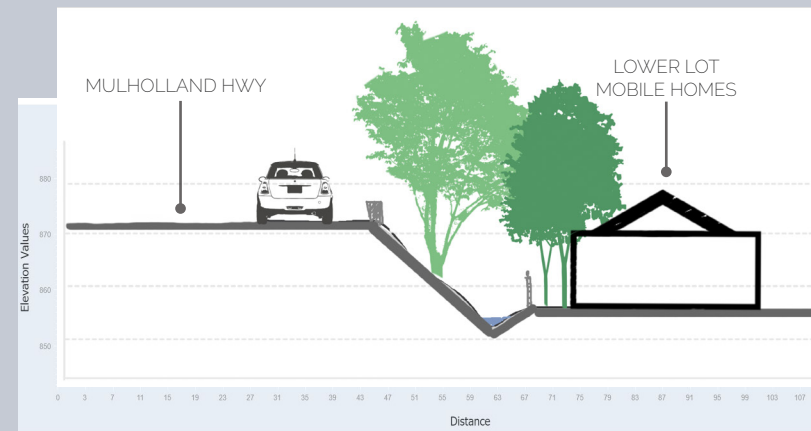
SECTION ELEVATION B-B

CONSTRAINTS

- Lake is a flood hazard

OPPORTUNITIES:

- Topography is natural privacy
- Lake connecting residents to nature



SECTION ELEVATION C-C

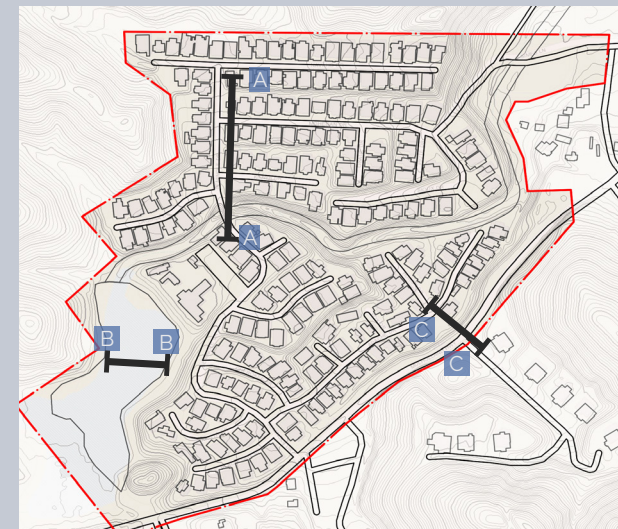
CONSTRAINTS

- Mulholland Hwy is 10' above lower lot grade

OPPORTUNITIES

- Topography is natural privacy
- Mulholland Hwy evacuation route
- Water runoff channel established

KEY MAP



SITE OPPORTUNITIES- UPPER LOT



- OPPORTUNITY FOR...**
- NEW MOBILE HOME LAYOUT WITH LEAST DENSITY
 - DEFENSIBLE SPACE DESIGN
 - EMERGENCY VEHICLE ACCESS
 - FIRESCAPING LANDSCAPE

- OPPORTUNITY FOR...**
- LA SIERRA CREEK RESTORATION
 - INCREASED HABITAT VALUE
 - CONNECTING RESIDENTS TO NATURE

- OPPORTUNITY FOR...**
- MUTIPLE ENTRANCES FOR EVAC
 - USE OF BACK ROAD/TRAILHEAD

- OPPORTUNITY FOR...**
- EXISTING PLAYGROUND
 - NATURAL SHADE FROM MATURE OAKS
 - CONNECTION TO GREATER SMM COMMUNITY



There are many opportunities throughout the site for wildfire resiliency strategies, defensible space, habitat enhancement, and community gatherings.

SITE OPPORTUNITIES- LOWER LOT



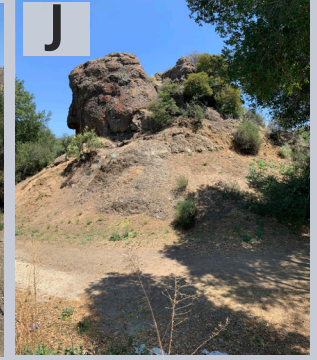
- OPPORTUNITY FOR...**
- RECREATION FOR RESIDENTS
 - CONNECTION TO NATURE
 - REVENUE GENERATION
 - EMERGENCY WATER RESOURCE

- OPPORTUNITY FOR...**
- RESIDENT SAFETY AND LEARNING HUB
 - REVENUE GENERATION

- OPPORTUNITY FOR...**
- NEW MOBILE HOME LAYOUT WITH MORE DENSITY
 - FIRESCAPING LANDSCAPE

- OPPORTUNITY FOR...**
- TALLER BUILDING SINCE ITS A LOWER AREA

- OPPORTUNITY FOR...**
- REVENUE GENERATION AREA- RENTAL HOMES
 - CLOSE TO THE LAKE BUT AWAY FROM RESIDENTS
 - ELEPHANT ROCK AS FOCI POINT



DESIGN METAPHOR

THE NEST

LIFE - GROWTH - HEALTH - STABILITY - FAMILY - PROTECTION
CARE AND RESPONSIBLE KEEPING OF YOUR ENVIRONMENT



California Gnatcatcher in its nest

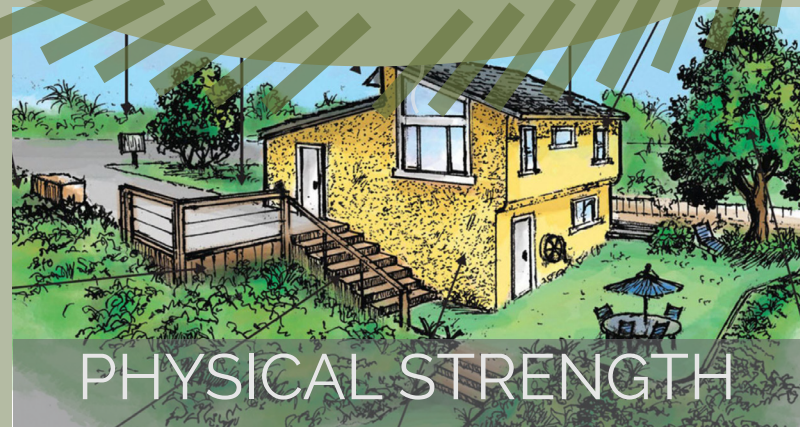
WHAT MAKES THE SEMINOLE
SPRINGS COMMUNITY A STRONG

NEST



THE ENVIRONMENT

- HEALTHY PLANT MATERIAL
- TOPOGRAPHY
- NATURAL ELEMENTS



PHYSICAL STRENGTH

- HARDENING THE HOME
- SAFE STREET DESIGN
- LANDSCAPE CHOICES



THE COMMUNITY

- VOLUNTEERS
- RESPONSIBLE HOMEOWNERS
- FIRST RESPONDERS

INSPIRATION IMAGES

REDESIGNED MOBILE HOME LOTS



Caravans at Beer Devon- England

LOW-RISE MULTI-UNIT COMPLEX



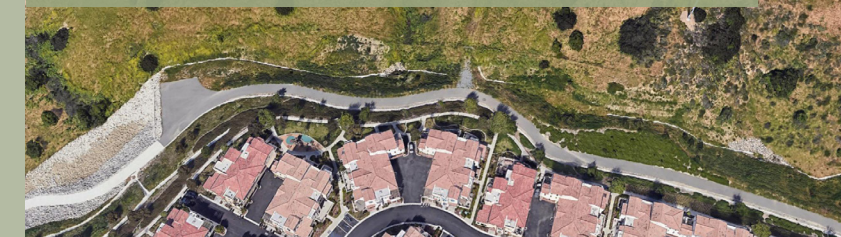
Fourplex Concept- Omgivning & Studio MLA

RENTAL/VACATION UNITS



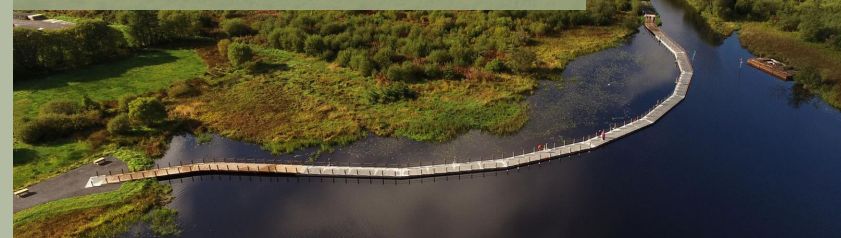
Droomparken Tiny Vacation Houses- Netherlands

VEGETATION AND ROAD BUFFER



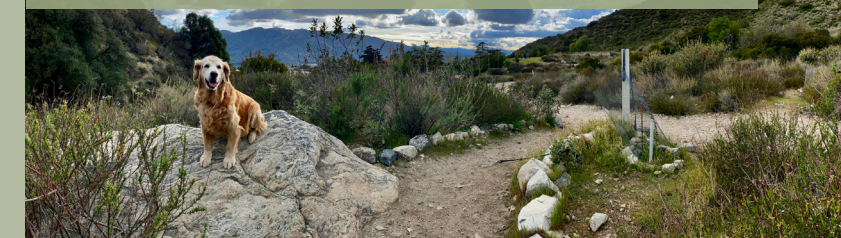
Rancho Mission Viejo- Orange County, CA

FLOATING WALKWAY



Shannon Blueway- Ireland

WALKING PATH TO TRAILHEADS



Deukmejian Wilderness Park- Glendale, CA

HELICOPTER LANDING PAD



Kebnekaise Mountain Station- Sweden

CLUBHOUSE/EM. SHELTER



Valley Fire evacuation center- Calistoga, CA

CONCEPT DIAGRAM 1



THE PHYSICAL NEST

A design focusing on being a physical stronghold, measured mostly by its safety. Using a road buffer, clear site lines, straight and wide streets. Evacuation is the number one priority—how quick can everyone get out, and how quick can emergency vehicles get in safely.

PROS:
SAFETY FOCUSED- EASILY ACCESSIBLE
INTERNAL PROTECTION

CONS:
RIGID, LACKING FLUIDITY
NOT CONNECTING WITH SURROUNDINGS

CONCEPT DIAGRAM 2



THE ENVIRONMENTAL NEST

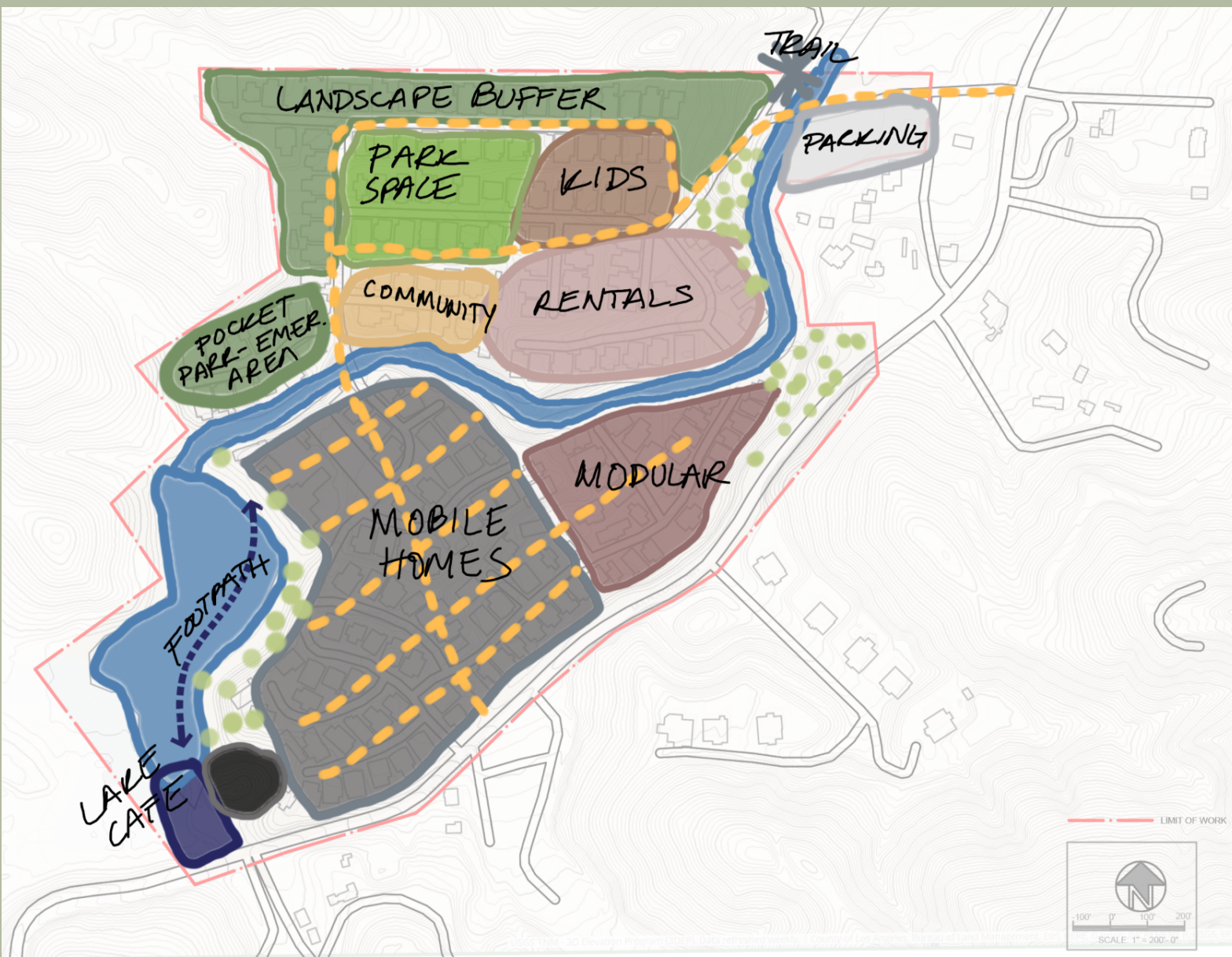
The idea of creating a natural barrier, that's more fluid with the existing environment. A landscape buffer and privacy throughout. More internal connections to nature and habitat corridors. Expanding the creek banks to restore them. Probably reducing the space for mobile home coaches.

PROS:
SAFETY AND INTEGRATING THE ENVIRONMENT
USING LANDSCAPE AS PRIVACY AND BUFFER

CONS:
LESS AVAILABLE SPACE FOR RESIDENTS
MORE WATER USE FOR LANDSCAPE

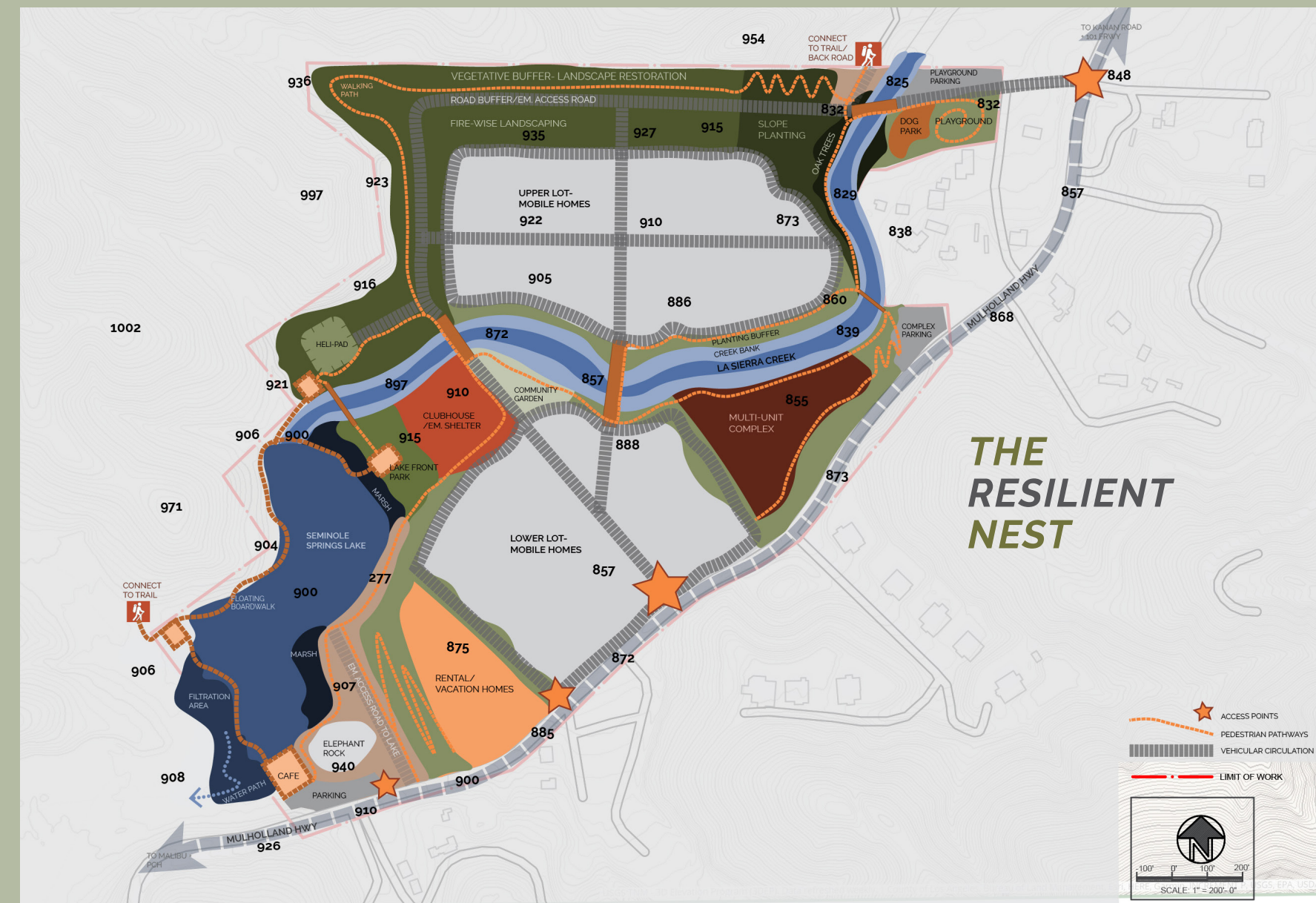
CONCEPT DIAGRAM 3

FINAL CONCEPT DIAGRAM



THE COMMUNITY NEST

Heavy on enhancing the community and its revenue generation
 There are only mobile homes and modular homes on the lower level to protect them
 The upper lot has all of the revenue generating spaces
 Rentals, community center, park space
 And the lake is kept more a private space for the residents.



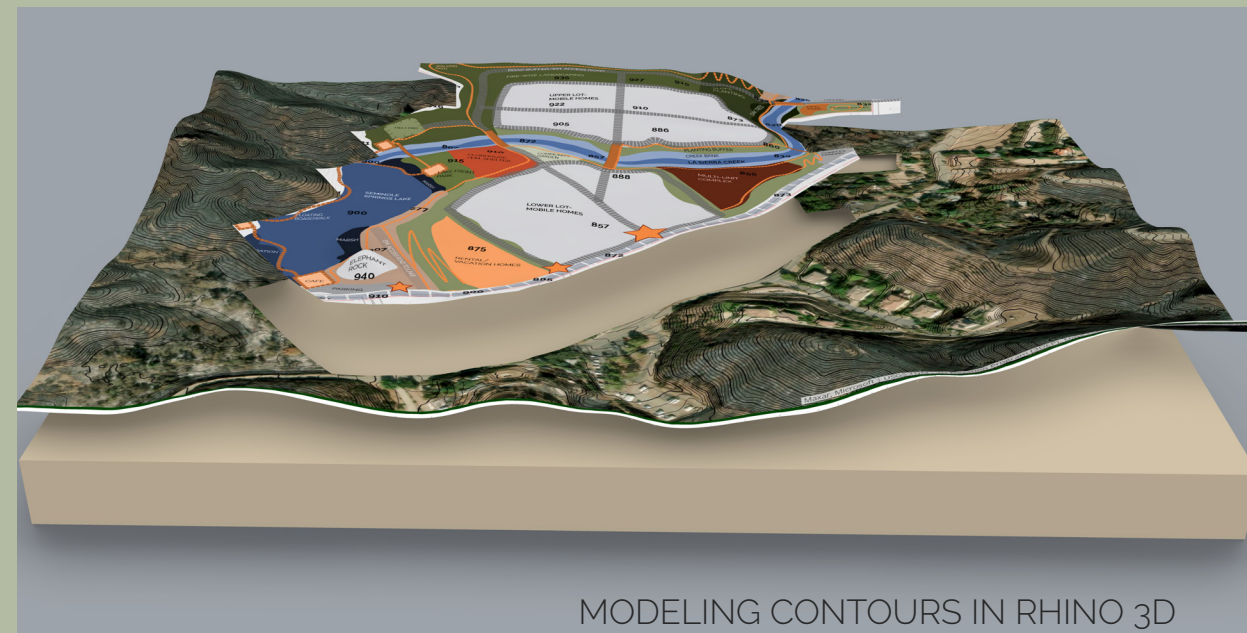
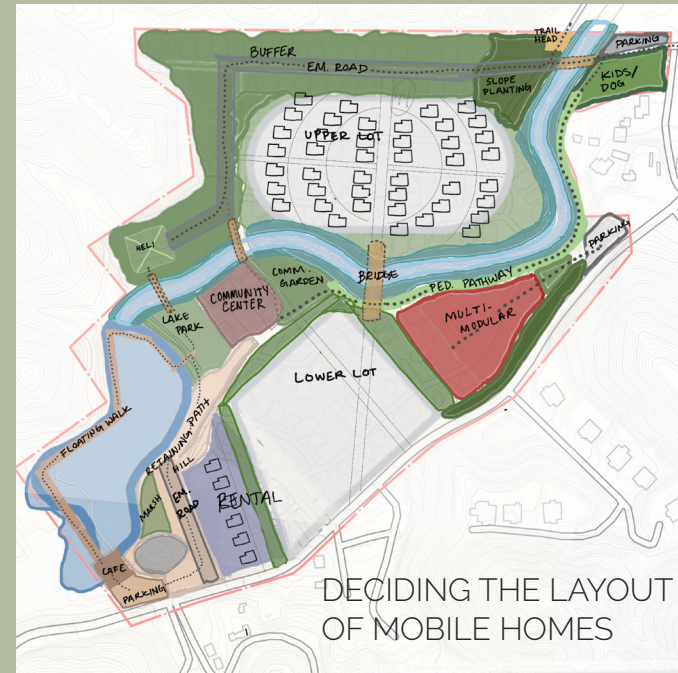
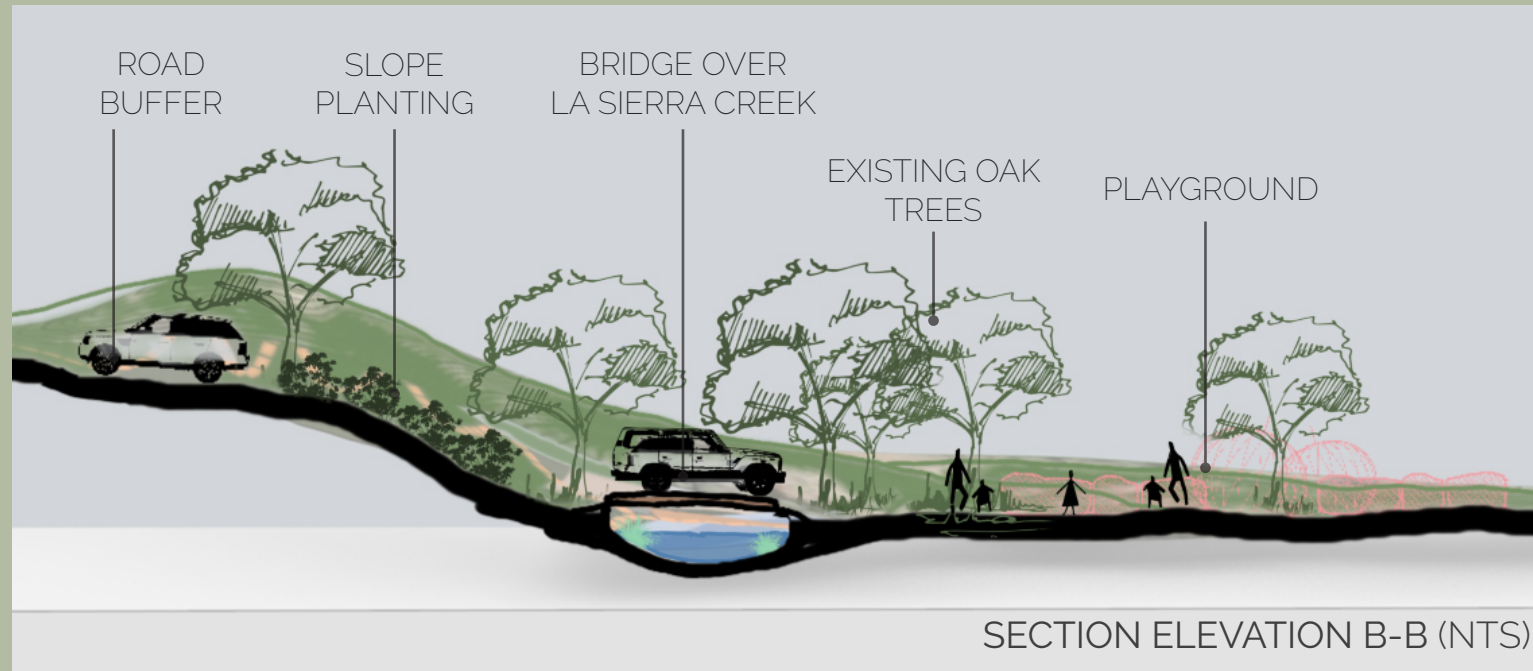
THE RESILIENT NEST

The final concept focuses on valuing safety and the communities resilience with a large vegetation and road buffer along the canyon edge, protecting the new upper lot, lower lot, and multi unit complex. It still encourages people to connect with nature via with trails, paths, healthy habitats. It's also revitalizing their resources for revenue generation through a café and rental units.

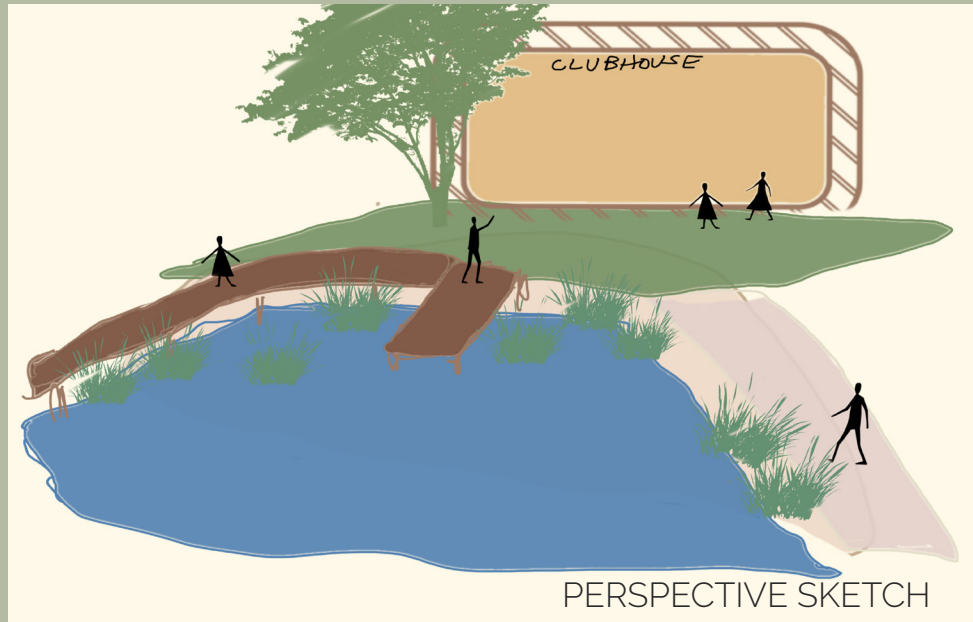
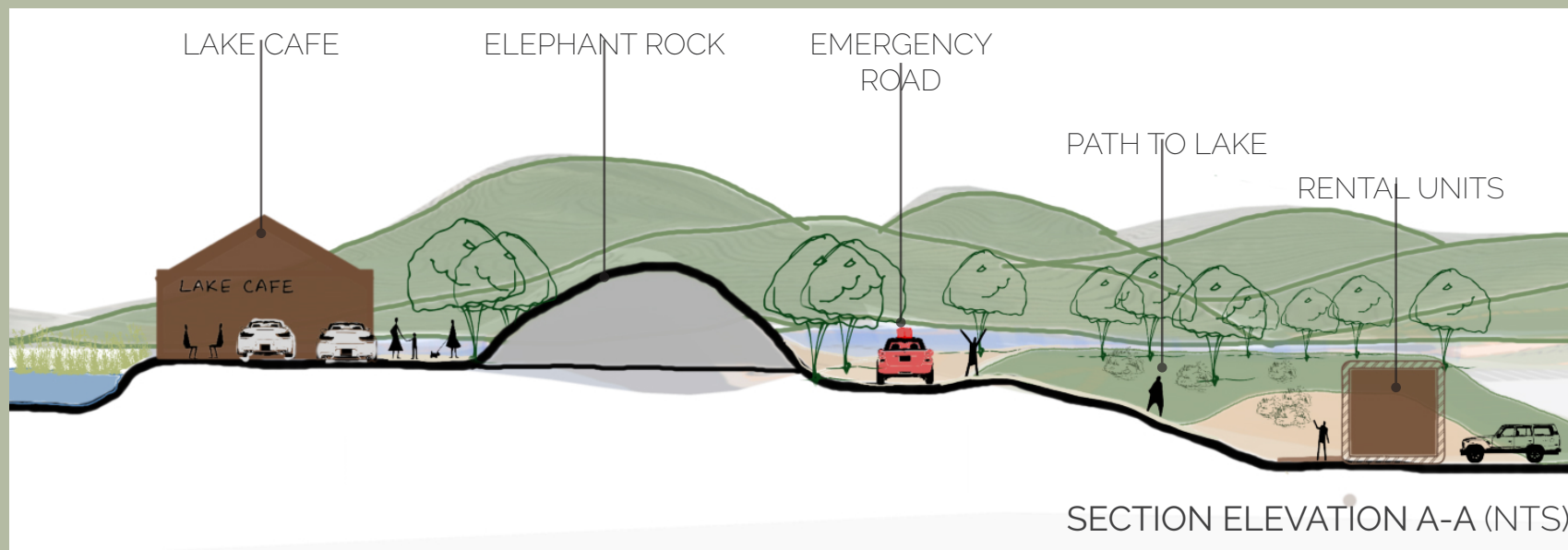
PROS:
 MORE OPP FOR REVNUUE GENERATION
 PRACTICAL CONCEPT

CONS:
 VIEWS REDUCED FOR RESIDENTS
 MORE CONDENSED LIVING

PROCESS WORK



After finalizing the concept, I sketched out how elevation changes and perspectives could be arranged. Then I used Rhino 3D to start modeling the new contours.



FINAL ILLUSTRATIVE PLAN

THE FINAL MASTER PLAN BRINGS YOU BACK TO THE IDEA OF THE NEST, BLENDING THIS COMMUNITY IN WITH THE SANTA MONICA MOUNTAINS.

A vegetation, water, and hardscape buffer of protection for the residents is simultaneously a transition habitat into the natural chaparral ecosystem. There are 75 mobile coaches, and 35 units in the multi complex, totaling 110 available homes. Clear site lines are prioritized for road systems, but walking paths and trails meander through oaks along the ridge of La Sierra Creek. Residents have private amenities to enjoy at their community clubhouse, while the co-op generates revenue through sixteen mini cabin rental units and a café by the lake.

- | | |
|----------------------------|------------------------------|
| A. MAIN ENTRANCE | N. PLAYGROUND/TRAIL PARKING |
| B. LOWER MOBILE HOME LOT | O. TRAIL HEAD/ FIRE ROAD |
| C. LOW-RISE COMPLEX | P. VEGETATION BUFFER |
| D. COMPLEX PARKING | Q. HELIPAD & EMERGENCY HUB |
| E. PEDESTRIAN TRAIL BRIDGE | R. LAKE PLATFORMS |
| F. LA SIERRA CREEK | S. SEMINOLE SPRINGS LAKE |
| G. LOT BRIDGE | T. LAKE LOOP |
| H. COMMUNITY CLUBHOUSE | U. TRAIL HEAD CONNECTION |
| I. COMMUNITY GARDEN | V. SEMINOLE HOT SPRINGS CAFE |
| J. BUFFER BRIDGE | W. BOAT RAMP |
| K. UPPER MOBILE HOME LOT | X. PUBLIC PARKING |
| L. PLAYGROUND AND DOG PARK | Y. MINI CABIN RENTALS |
| M. BUFFER ROAD ENTRANCE | Z. PRIVATE RENTAL ENTRANCE |



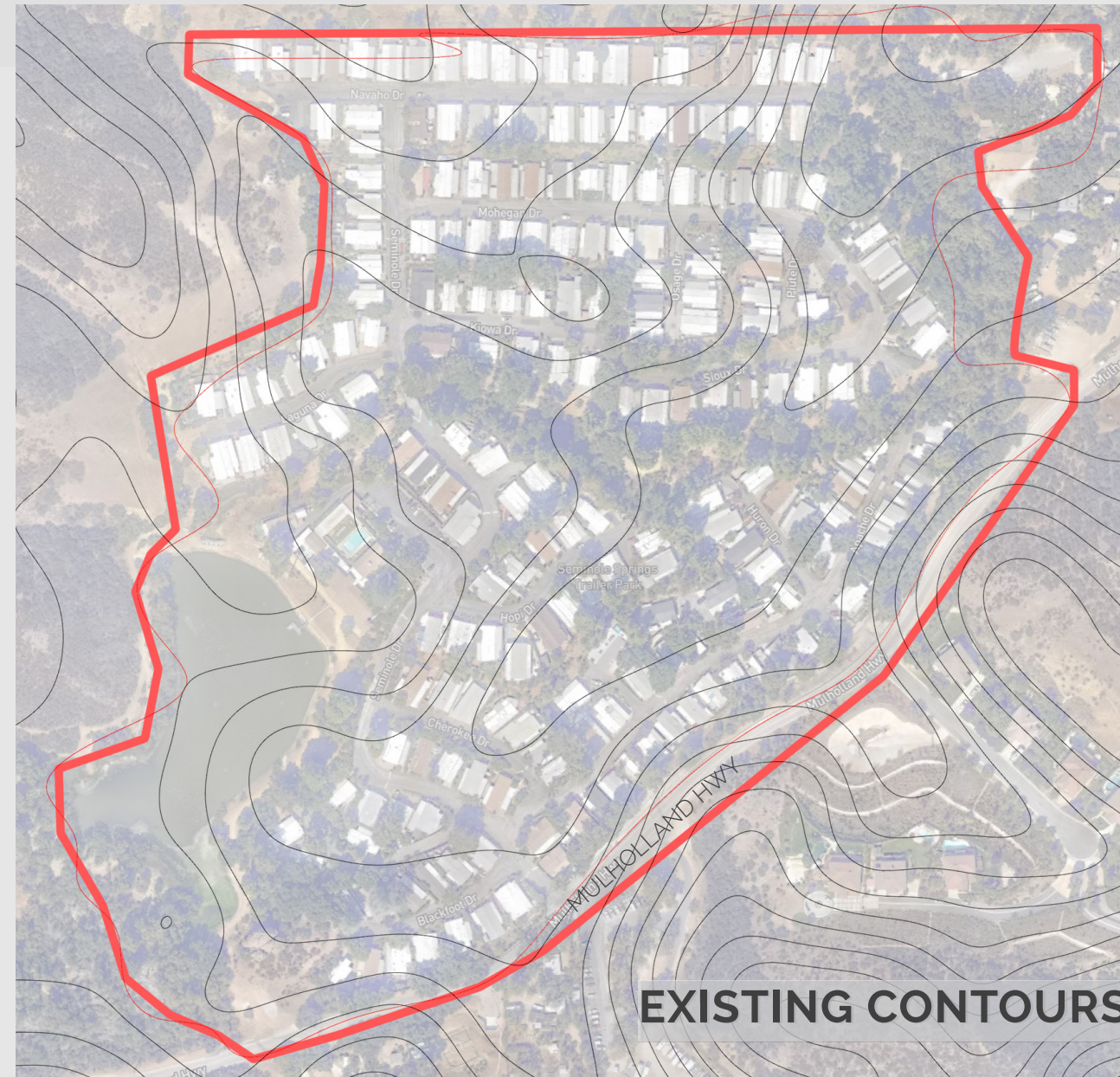
0 210 420 840 N

TOPOGRAPHY CHANGES

A major challenge within the site boundaries was the topography. A new contour plan is proposed that more evenly grades the internal spaces, while still connecting with the natural topography of the surrounding landscape and roadways, as these areas must remain undisturbed or protected.

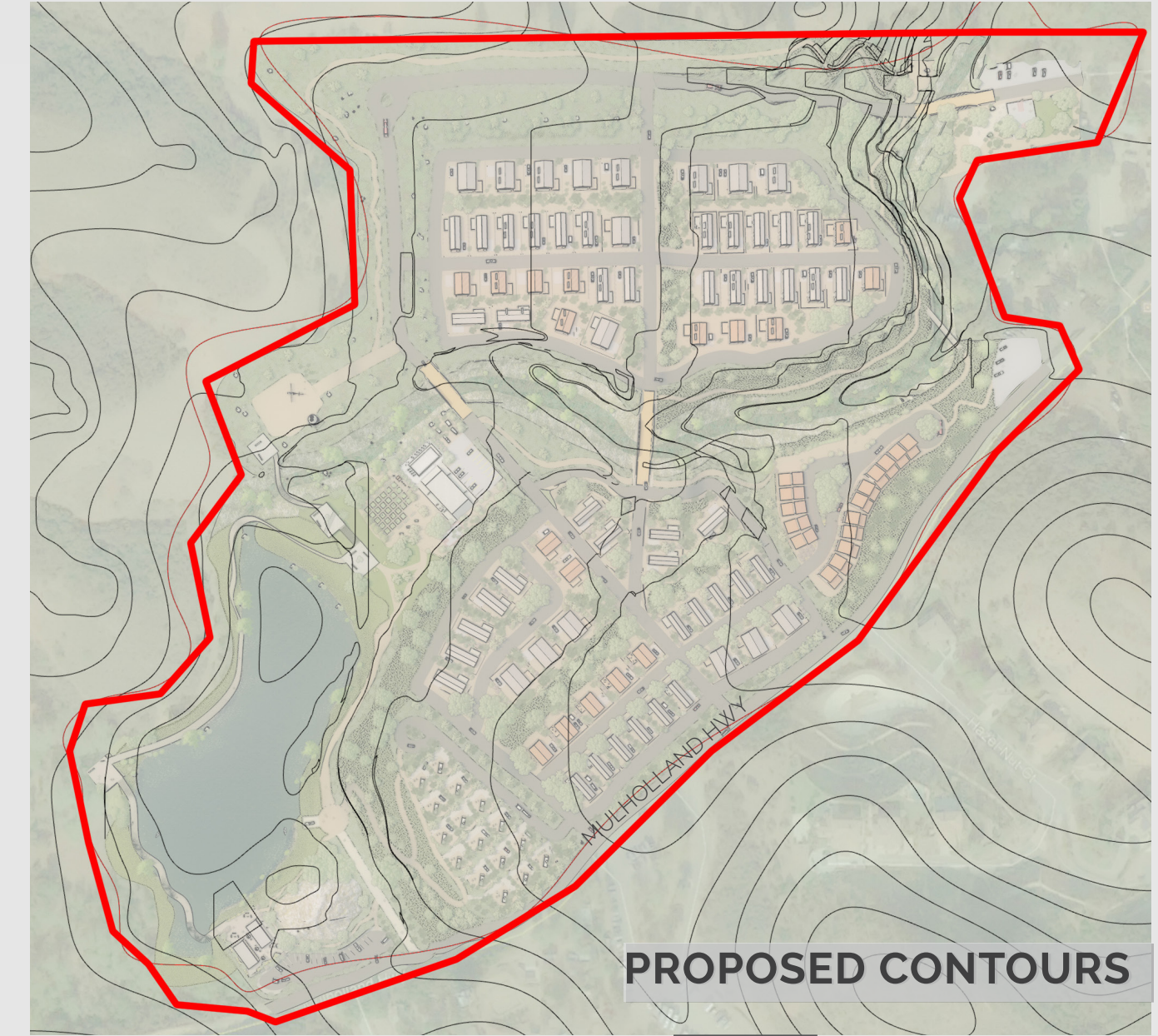


It also addresses the stream banks and steep slopes by reinforcing them with retaining walls and gabion cage systems.



CONTOURS SET AT 20'
0 225 540 N

- SUNKEN IN THE CENTER
- AT RISK FOR FLOODING LOWER AREAS
- DRAMATIC TOPOGRAPHY CHANGES
- EROSION CONTROL NOT ADDRESSED



CONTOURS SET AT 20'
0 225 450 N

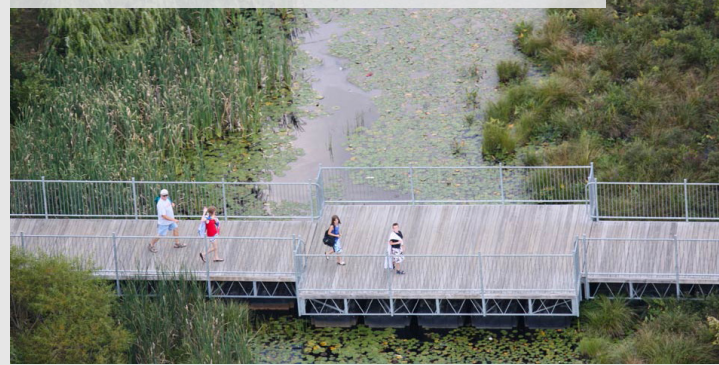
- MOBILE HOME COACH AREAS GRADED EVENLY
- LOWER LOT IS LEVEL WITH MULHOLLAND HWY
- STREAM BANK EDGES DEFINED
- STEEP SLOPES REINFORCED WITH RETAINING WALLS, GABIONS

TOUR THE SITE...

AS A RESIDENT...



AS A VISITOR...



IN AN EMERGENCY...



- 1 LOWER MOBILE HOME LOT
- 2 MULTI-UNIT LOW RISE COMPLEX
- 3 UPPER MOBILE HOME LOT
- 4 COMMUNITY CLUBHOUSE
- 5 BALLARD'S CABIN RENTALS
- 6 SEMINOLE HOT SPRINGS CAFE
- 7 SEMINOLE LAKE LOOP
- 8 VEGETATION & ROAD BUFFER
- 9 HELIPAD & EMERGENCY HUB



1 LOWER MOBILE HOME LOT



ENLARGEMENT

0 120 240 720

PROGRAM LEGEND

- A. Main entrance
- B. 34 mobile home units
- C. 30' wide street
- D. Bridge to upper lot



PERSPECTIVE 1- RESIDENT COACHES WITH PERSONAL LANDSCAPE TOUCHES

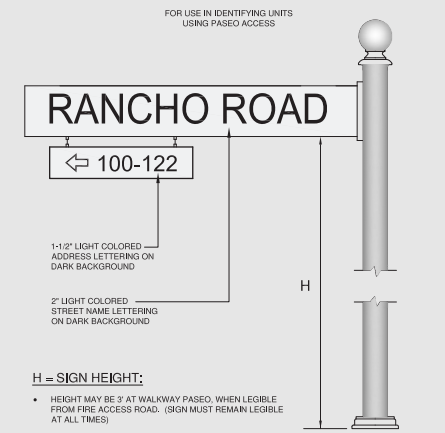


SECTION ELEVATION A-A
HEADING UPHILL TOWARDS THE COMMUNITY CLUBHOUSE



KEY MAP

INSPIRATION- SeaTac mobile home community



DETAIL: wayfinding signage for unit addresses

2 MULTI-UNIT LOW RISE COMPLEX



ENLARGEMENT

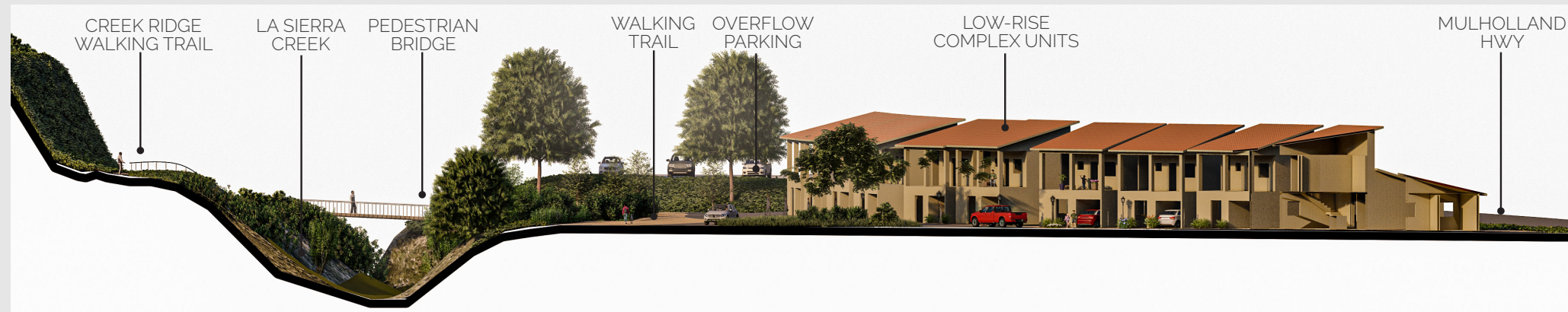


PROGRAM LEGEND

- A. Private complex entrance
- B. Low-rise complex (32 units)
- C. 38' radius turnaround- see detail
- D. Additional parking for complex
- E. Pedestrian bridge over creek
- F. La Sierra Creek
- G. Creek Ridge walking trail



PERSPECTIVE 1- CENTRAL COURTYARD WITH LA SIERRA CREEK IN THE BACKGROUND

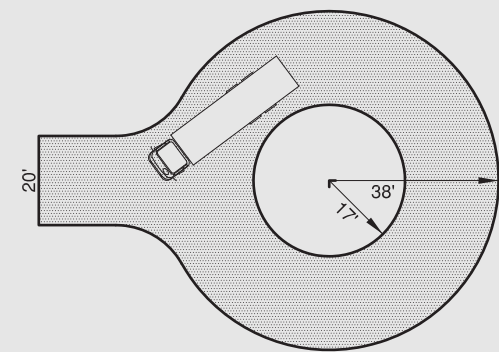


SECTION ELEVATION A-A
WALKING TRAIL CROSSING LA SIERRA CREEK TO THE LOW-RISE COMPELX



KEY MAP

INSPIRATION
Low Rise Fourplex, Omgivning & Studio MLA



DETAIL: turnaround dimensions

3 UPPER MOBILE HOME LOT

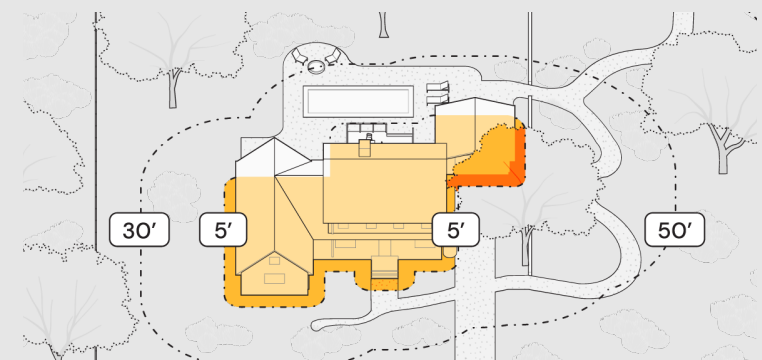


ENLARGEMENT



PROGRAM LEGEND

- A. Mobile home units
- B. Seminole Springs walking path
- C. Oak Grove
- D. Playground + dog park with parking
- E. Road to alternative entrance
- F. Trailhead and fire-road entrance
- G. Vegetation buffer
- H. DG road to helipad
- I. Bridge to clubhouse



DETAIL: Defensible Space zones
 0-5' : The Ember-Resistant Zone (no planting)
 5'-30' : Lean, Clean, Green Zone



PERSPECTIVE 1- THE EASTERN COACHES OF THE UPPER LOT, AND THE WALKING PATH BELOW



SECTION ELEVATION A-A
 THE ELEVATION CHANGE OF THE UPPER LOT



KEY MAP



INSPIRATION- Oak grove path
 Fire-wise landscaping



4 COMMUNITY CLUBHOUSE



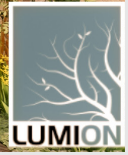
KEY MAP



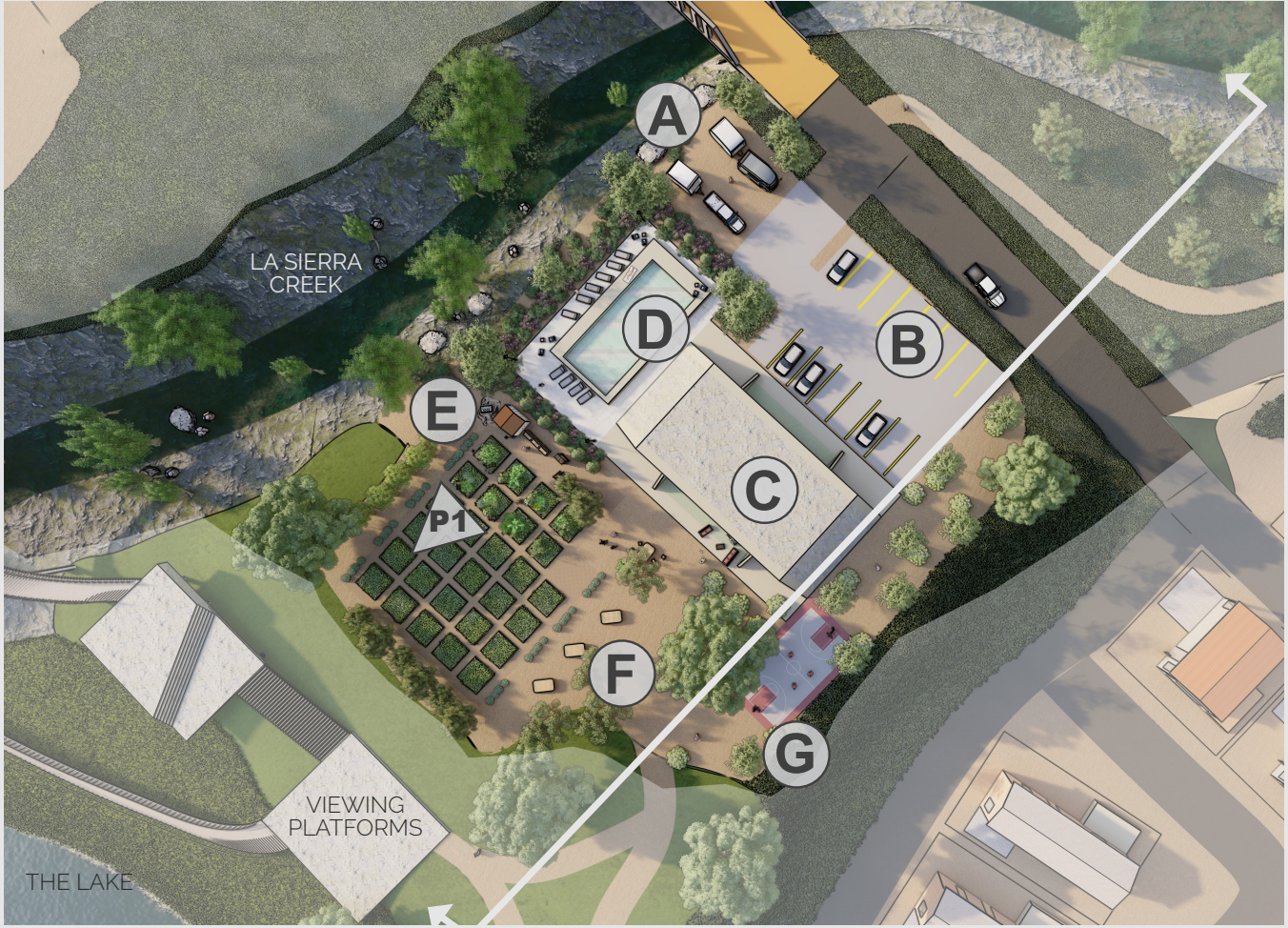
INSPIRATION: community garden
Communal picnic areas



PERSPECTIVE 1- THE COMMUNITY GARDEN IS FULL OF ACTIVITY



SECTION ELEVATION A-A
THE RESIDENT COMMUNITY AREA SITS ON AN ELEVATED PLATFORM



PROGRAM LEGEND

- A. Trailer parking
- B. Clubhouse/ Guest parking
- C. Community Clubhouse
- D. Community pool
- E. Community garden plots
- F. Picnic tables
- G. Basketball court

5 BALLARD'S CABIN RENTALS



ENLARGEMENT

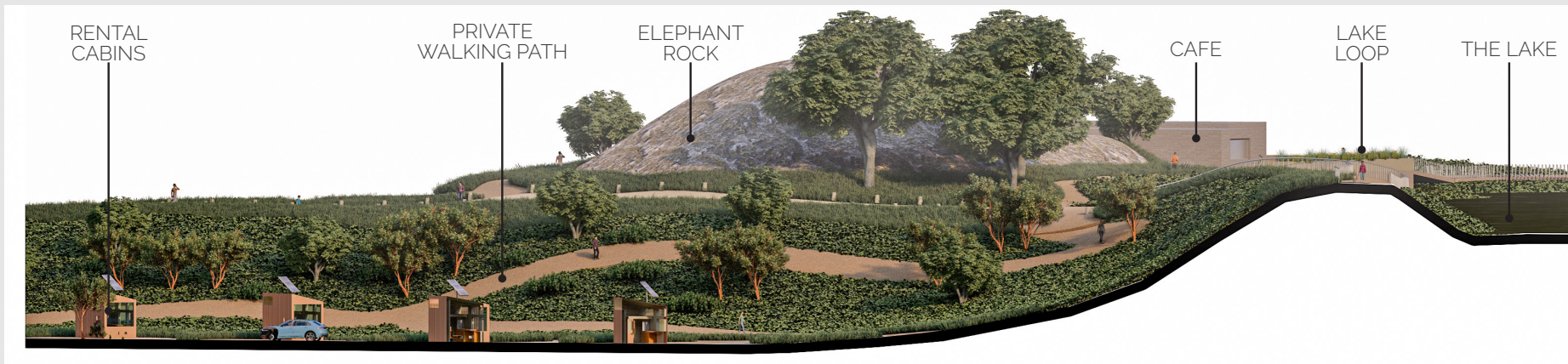
PROGRAM LEGEND

- A. Designated guest entrance
- B. Modular micro cabin rentals
- C. Vegetation privacy buffer

- D. Turnaround
- E. Private walking path to lake and cafe



PERSPECTIVE 1- DOWN THE PRIVATE PATH FOR NIGHTLY CABIN GUESTS



SECTION ELEVATION A-A
THE PATH FROM THE CABINS UP TO THE LAKE AND CAFE



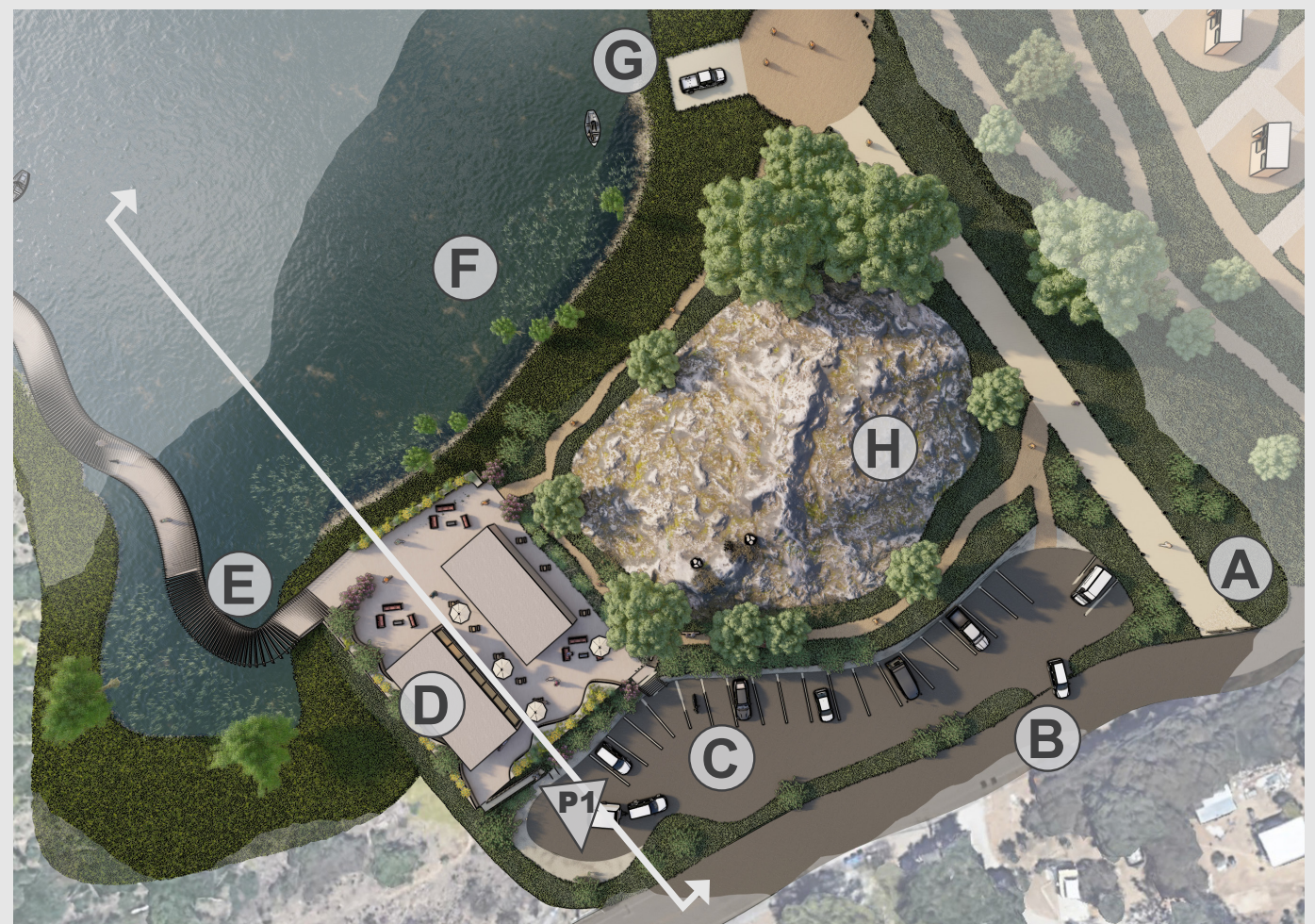
KEY MAP



INSPIRATION: Wheelhaus modular cabins



6 SEMINOLE HOT SPRINGS CAFE



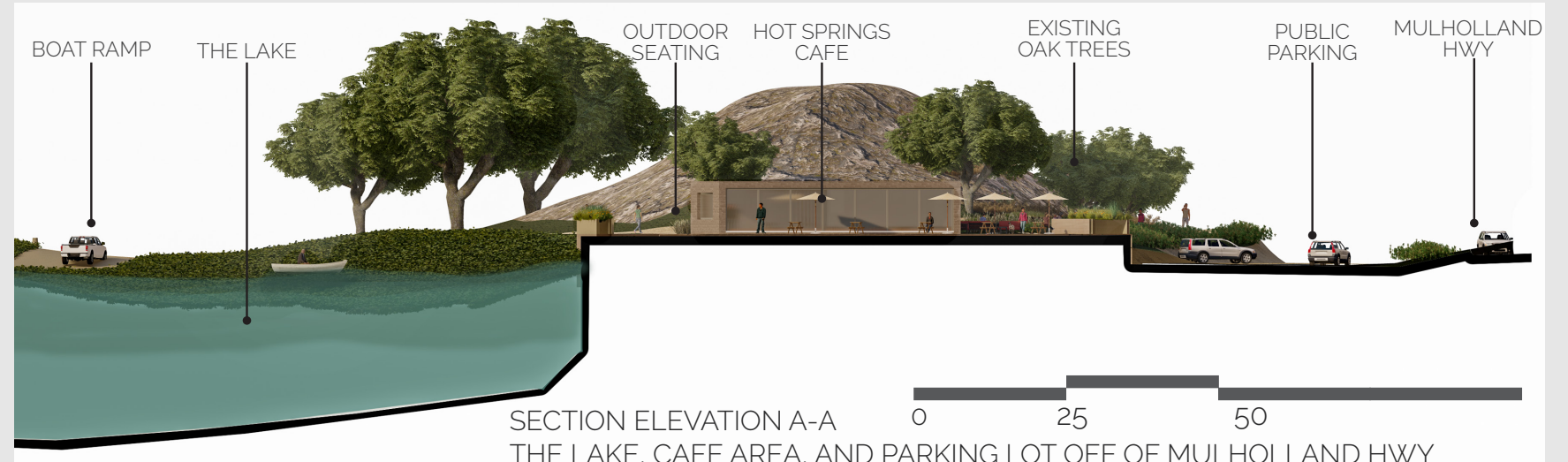
ENLARGEMENT
0 60 120 240 N

PROGRAM LEGEND

- A. Gated entrance to boat ramp
- B. Public entrance to lake parking
- C. Lake and cafe parking
- D. Cafe and local shops
- E. Lake Loop path
- F. Marsh planting
- G. Boat ramp
- H. Elephant Rock



PERSPECTIVE 1- A REFRESHING AND SCENIC PIT STOP OFF MULHOLLAND HWY



SECTION ELEVATION A-A
THE LAKE, CAFE AREA, AND PARKING LOT OFF OF MULHOLLAND HWY
0 25 50



KEY MAP



INSPIRATION: seating by the lake
Modular shipping container cafes



7 SEMINOLE LAKE LOOP



ENLARGEMENT

PROGRAM LEGEND

- A. Lake Loop entrance
- B. Connection to trail head
- C. La Sierra Creek
- D. Upper viewing platform
- E. Lower viewing platforms
- F. Lake Loop Park
- G. Boat ramp



PERSPECTIVE 1- "FLOATING" WALKWAY OVER THE LAKE LEADING TO NEW TRAIL HEAD



KEY MAP

INSPIRATION: interpretive signage

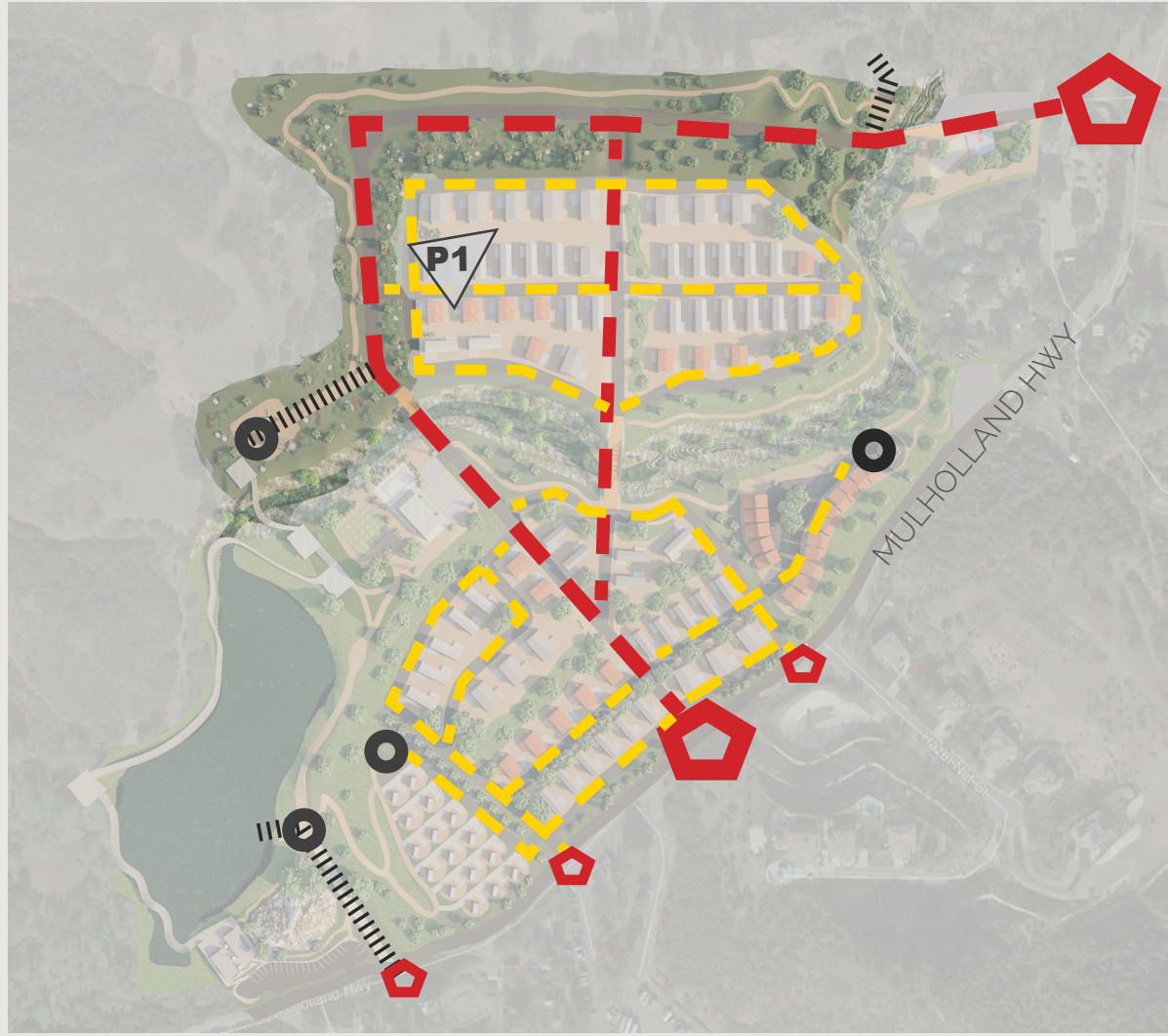


MATERIAL: Shou shi ban fire-retardant wood



SECTION ELEVATION A-A
THE VIEW OF THE NORTHERN AREA OF THE LAKE

8 VEGETATION BUFFER



VEHICULAR CIRCULATION MAP

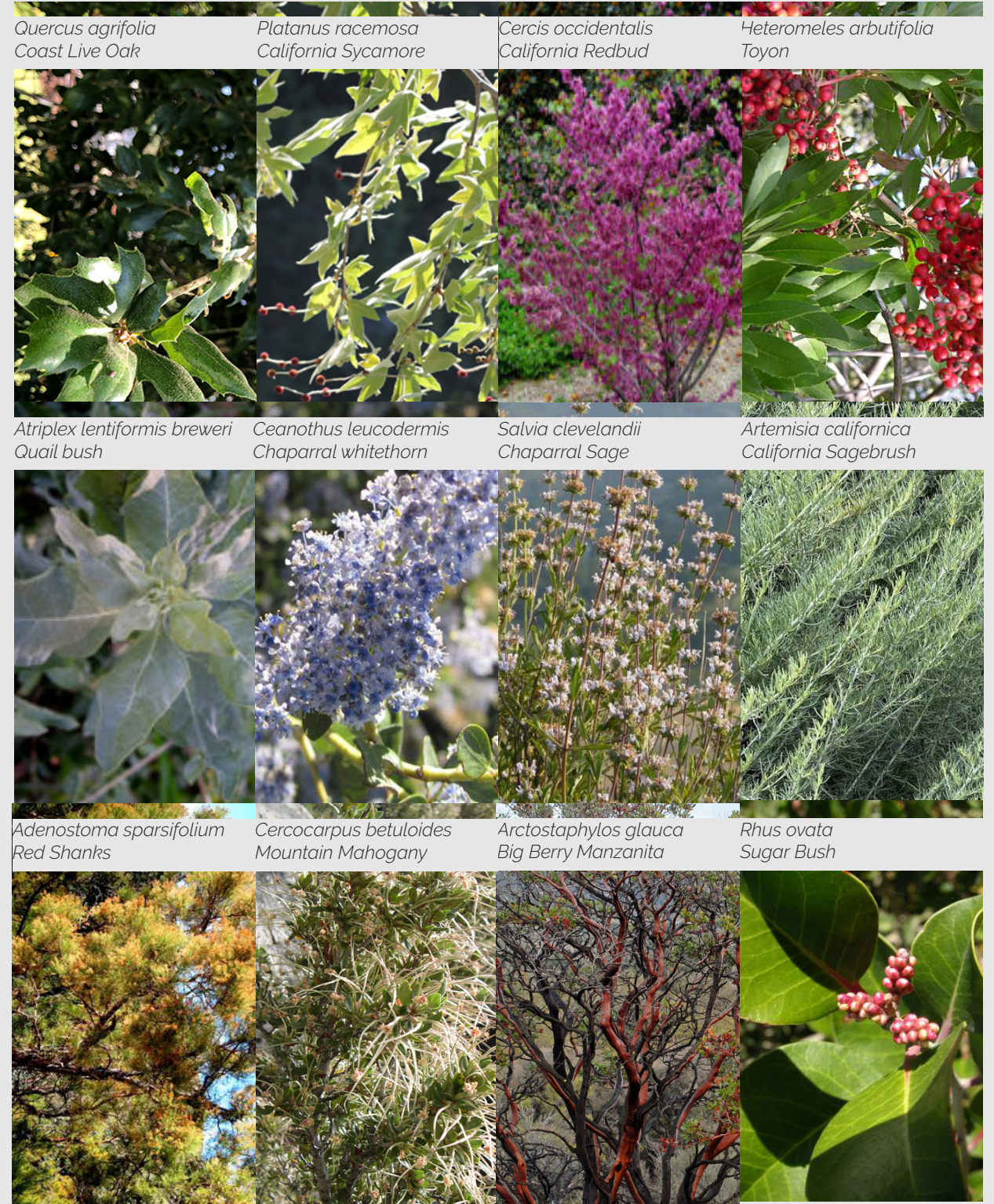
- LEGEND
- PRIMARY EVACUATION
 - SECONDARY EVACUATION
 - TURNAROUNDS
 - PRIMARY CIRCULATION
 - SECONDARY CIRCULATION
 - FIRE/ RESOURCE ROADS

Emergency services make their way to the site, using one of the primary entrances, and the buffer road. Residents evacuate using the secondary circulation.



PERSPECTIVE 1- A WILDFIRE STARTS IN THE NORTHWESTERN AREA OF THE SITE

It's important to address a wildfire emergency at the site. Lets say it's October, and the Santa Ana's have caused a power line to spark, starting a fire in the hills near our community. The embers from the fire are being picked up by the wind, but the well-maintained 200' vegetation buffer on our site is made up of fire-resistant plants. These native plants, **such as those pictured right**, are native or have adapted to the chaparral environment and can retain moisture for longer periods of time. In return, they do not significantly contribute to a fire's intensity, slowing down the spread.



9 HELIPAD + EMERGENCY HUB



ENLARGEMENT



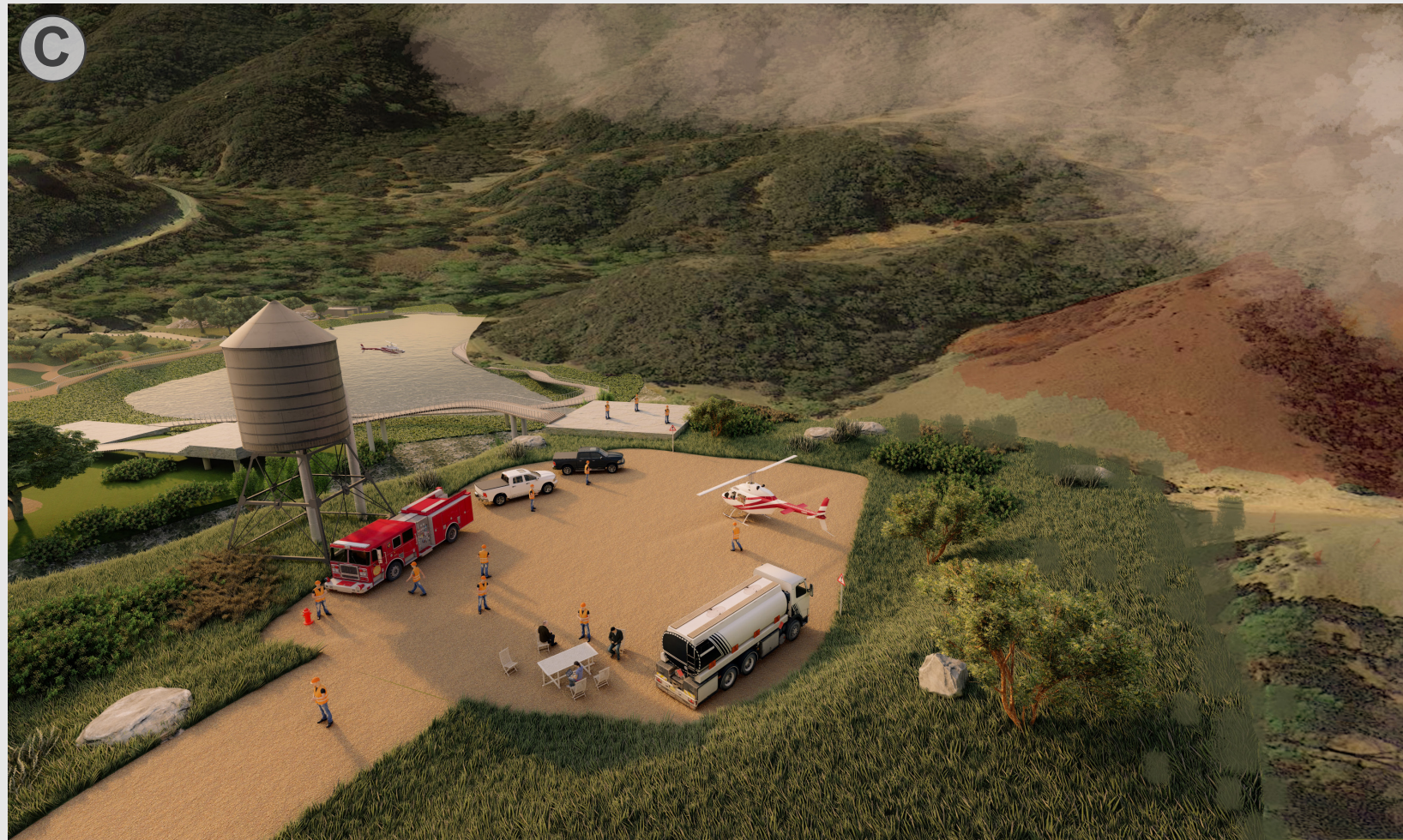
KEY MAP



EVACUATION ROUTE WAYFINDING



CLUBHOUSE AS DISASTER RELIEF CENTER



PERSPECTIVE 1- THE HELIPAD ACTS AS AN EMERGENCY PLANNING HUB

Meanwhile, some community volunteers help at the clubhouse which is being used as a disaster relief center, providing care for first responders or residents who need assistance. At the helipad, firefighters are gathering and planning their strategies for defense. The lake is being used by both fire helicopters for water drops, and as a refill station for firetrucks. **Within the day, the fire is contained, and residents return safely back to their homes.**



LAKE AS A SOURCE FOR REFILLING FIRETRUCK TANKS



THE LAKE AS A SOURCE FOR FIRE HELICOPTOR

SEMINOLE SPRINGS MOBILE HOME PARK

A FIRE-ADAPTED COMMUNITY NESTLED WITHIN THE SANTA MONICA MOUNTAINS

Landscape architecture is essential to the “from the house out” wildfire management model.

A community can improve their wildfire resiliency while staying deeply connected to one another.

The final gift of this design model is that residents get to remain connected to the natural world.

Through this master plan, landscape architecture can be used to help a community rebuild and recover as fire-adapted.



THANK YOU

*Stephanie Landregan, Program Director
Melissa McDonald, Program Manager*

*Meg Coffee, Capstone Instructor
Jim Pickel, Capstone Instructor
Pamela Brief, Capstone Instructor*

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*A special thank you to my Capstone Cohort
and to my family and friends.*

*Your encouragement and support means the world to me.
Let's never stop learning from each other.*



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