ALTERNATIVE MATERIALS CURRENTLY BEING USED IN SAN DIEGO

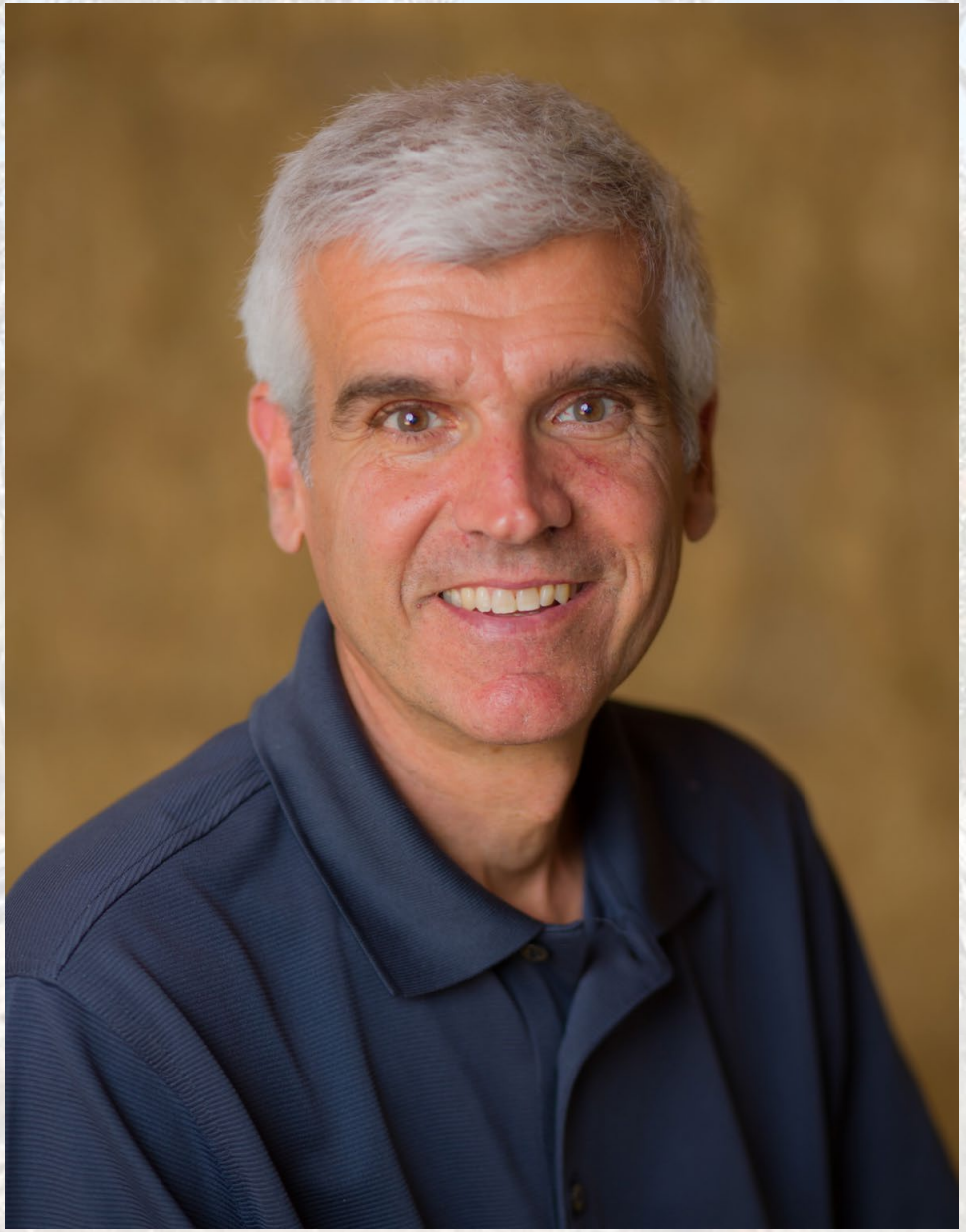
[SDGBCE23]

DREW HUBBELL

- 20 years as a principal of Hubbell & Hubbell Architects, Inc. helping pioneer the use of alternative building materials in San Diego County.
- Bachelor of Architecture from the University of Arizona.
- Drew's education includes the architectural program at the Danish Institute of Study, Copenhagen, Denmark.
- 6 years as Project Architect with Milford Wayne Donaldson specializing in historic preservation & adaptive reuse of existing structures to custom residential design.
- Drew sits on the Board of Directors for the following non-profit organizations: Ilan-Lael Foundation, Cowles Mountain Foundation, Mid-City Little League & Citizens Coordinate for Century 3.

ED EARL

- Principal, Priority One Projects, Construction Project Management
- 35 years construction experience
- MBA from Stanford University
- 25 years as Owners Rep for estate home construction (largest was 27,000 sf) and high-end remodels
- Expanded his focus to include diverse projects from a straw bale monastery to a safari camp rebuild in Botswana
- 20 year practitioner of Buddhism with Zen Master Thich Nhat Hanh
- Combines mindfulness techniques and communication technologies to create ‘Collaborative Construction’
- Runs two other businesses: commercial property management and business coaching for contractors



MYKAELA SCARPACE

- Grew up on the East Coast
- Master of Architecture (2019) and Bachelor of Architecture (2017) from Wentworth Institute of Technology in Boston, MA.
- Masters thesis studied how humans interact with the natural world and how that positive connection can extend to sustainable design strategies. The hope was to better understand how interacting with these strategies can create not only higher performing buildings, but also a more enjoyable and more aesthetically enriching built environment.
- LEED Green Associate certification
- Co-founded a sustainability group at the architecture firm that she (now previously) worked for
- Associate at Hubbell and Hubbell Architects

DR. JOI LIN BLAKE

- Owner of the Serenity Project – pursuing her vision of creating sustainable communities
- CEO of Common Good Executive Strategies LLC, an executive coaching firm
- 30+ years of experience working with diverse organizations and professional teams in California
- Experience in the California Community College System and has provided leadership for several capital bond projects with a focus on sustainable and universal design principles
- She provided leadership for the Palomar College Maintenance and Operations facility
- Recipient of the Malone Grand Orchid in 2019

DREW HUBBELL: BEGINNINGS

Growing up in Julian, CA

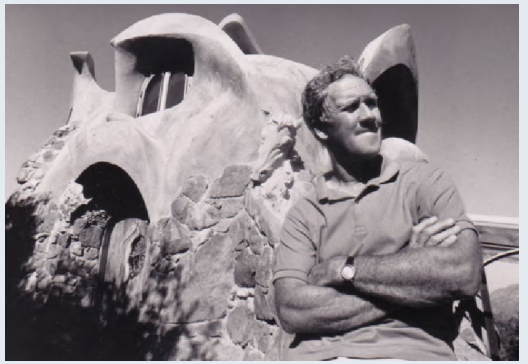
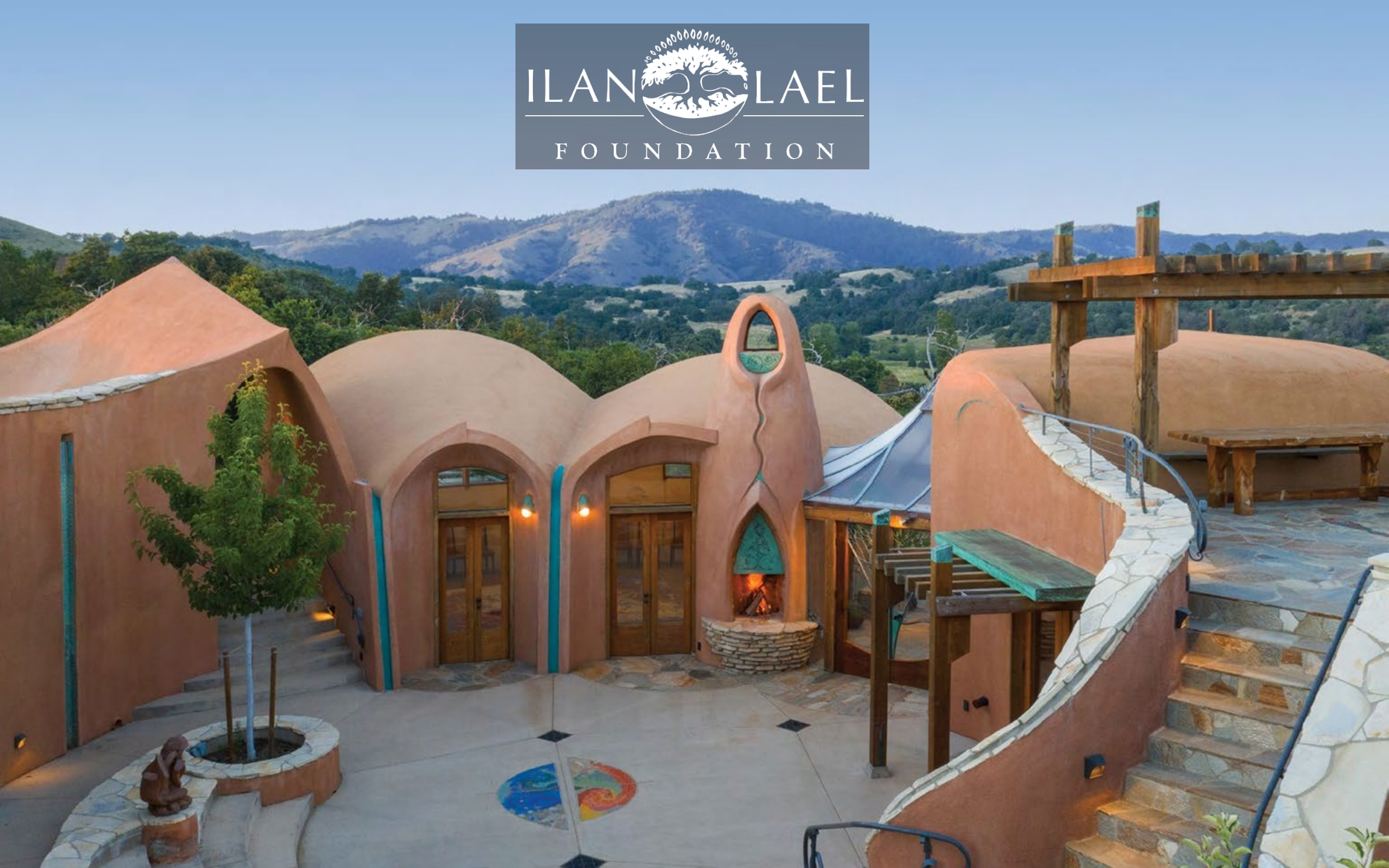


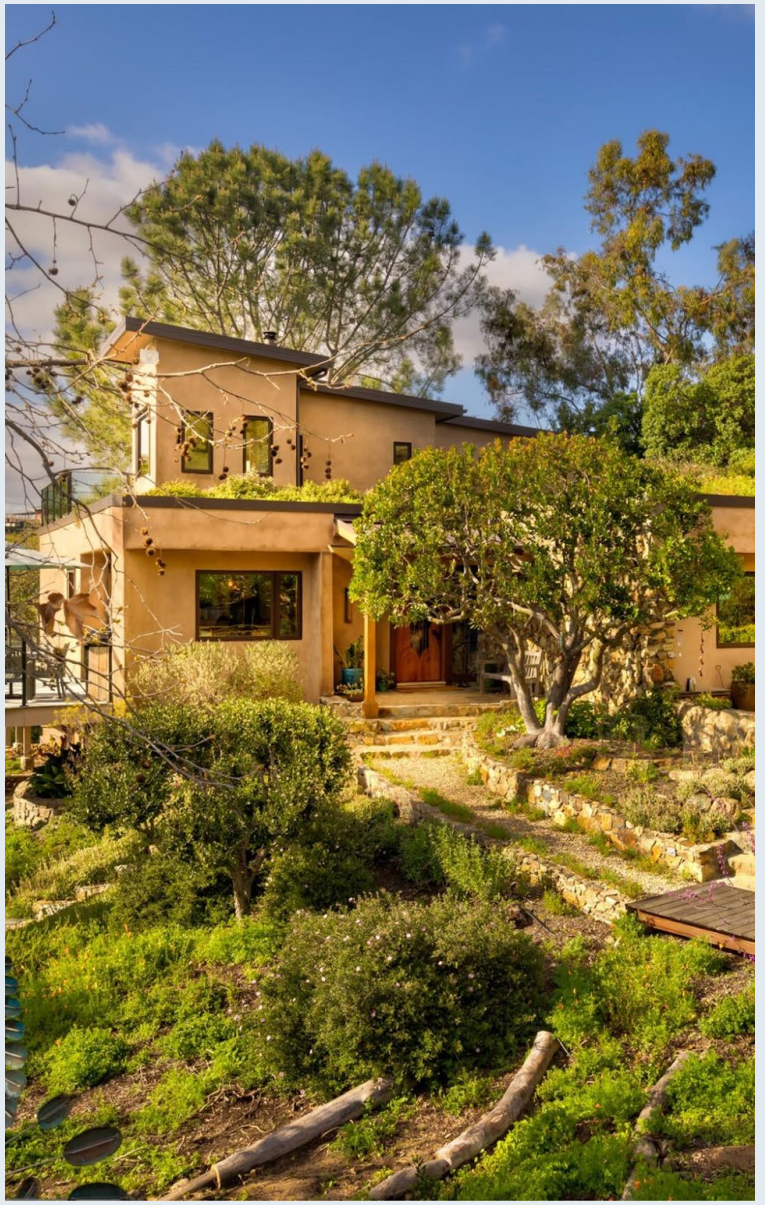

PHOTO: JOHN DURANT


ILAN LAEL
FOUNDATION

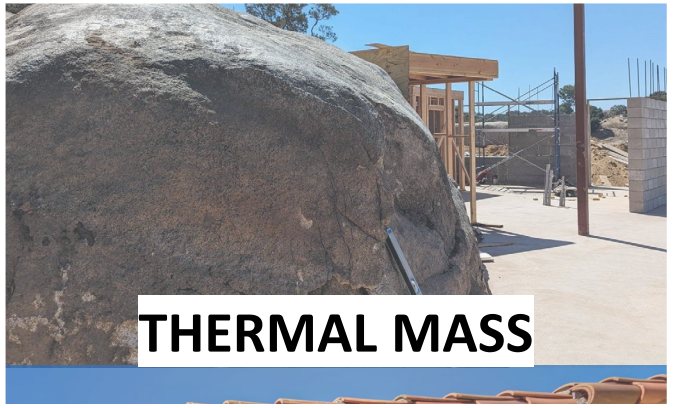
ILAN-LAEL

ILAN-LAEL FOUNDATION GROUNDS MAP

HUBBELL AND HUBBELL ARCHITECTS



GREEN BUILDING



STRAWBALE

Materials:

Made from the bi-product of grain crops, like wheat. The pieces of grain are typically tied together with twine.

Benefits:

- Sustainable, low-embodied energy
- Natural and non-toxic
- High acoustical performance
- High thermal performance
- Fire-resistant
- Less layers / steps in construction
- Unique material that provides a connection to nature

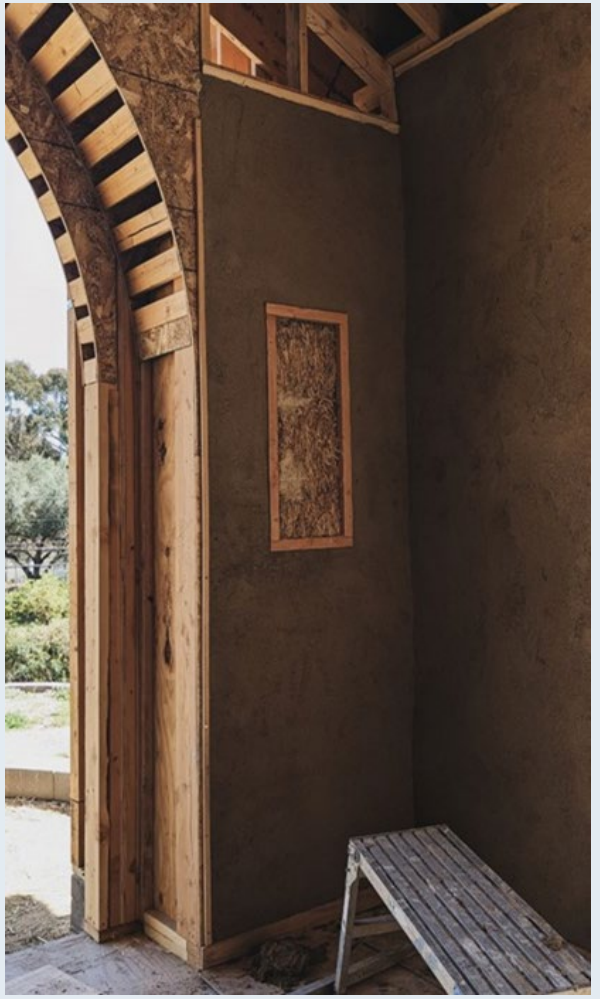
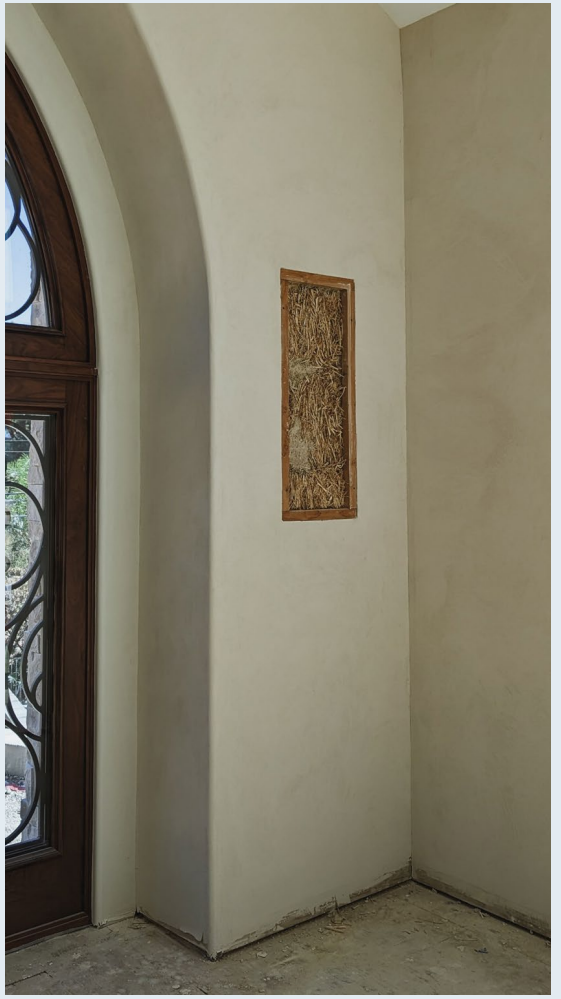
Drew Hubbell - Hubbell & Hubbell Architects

STRAWBALE - DEER PARK MONASTERY

Deer Park Monastery - Hubbell & Hubbell Architects

STRAWBALE - PLASTERING PROCESS



Romero Residence - Bonita, CA - Hubbell & Hubbell Architects & Simple Construct

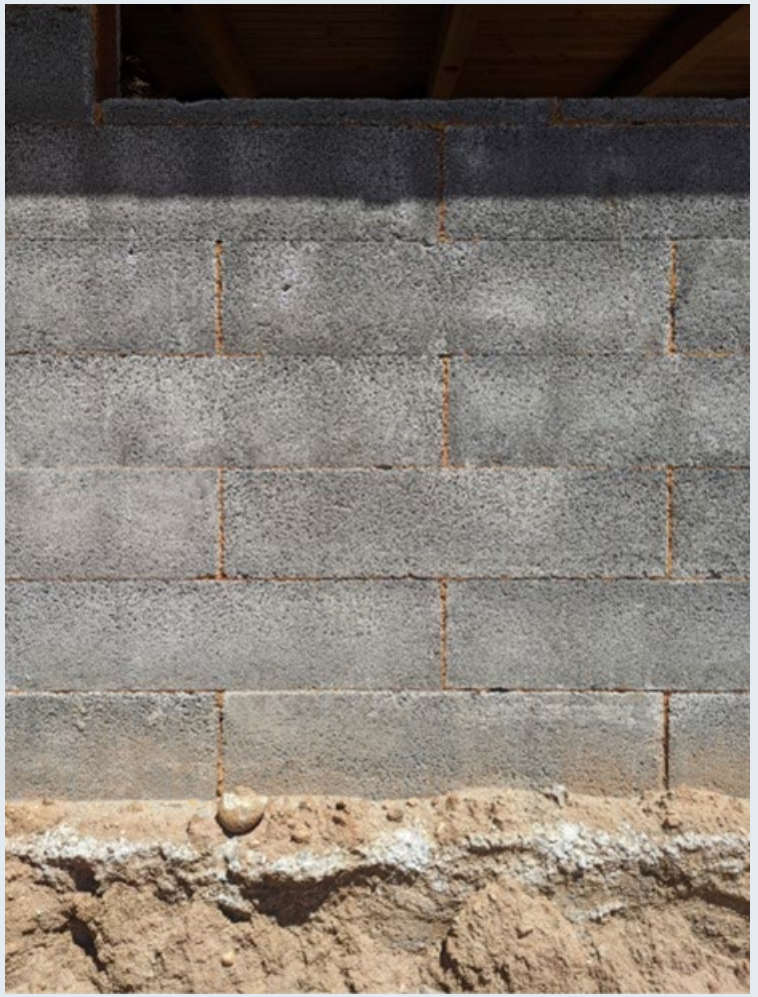
INSULATING COMPOSITE CONCRETE FORM (ICCF)

Materials:

Cinder-like blocks made from ground-up post-consumer Styrofoam & cement. The core of the block is filled with reinforced steel and concrete.

Benefits:

- Made from recycled materials
- High acoustical performance
- High thermal performance
- Fire-resistant
- Earthquake-resistant
- Insect-resistant
- Less layers / steps in construction



Peterson Residence - CA - Hubbell & Hubbell Architects & Lawrence Construction

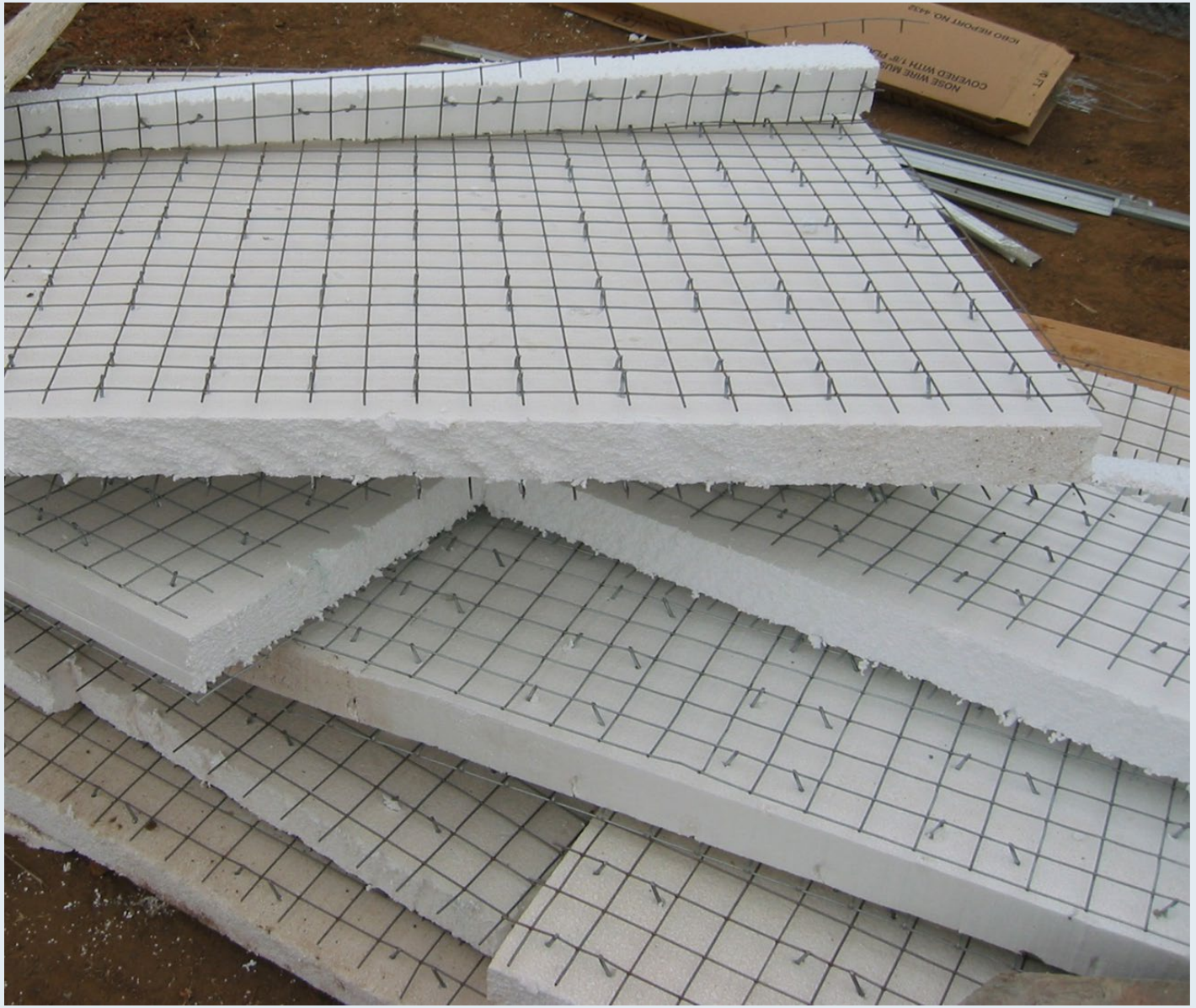
SANDWICH PANELS: FOAM / METAL MESH

Materials:

Pre-fabricated recycled expanded polystyrene panels framed by wire mesh

Benefits:

- Made from recycled materials
- Fire-resistant
- Earthquake-resistant
- Design versatility – any shape / form
- Can be used for walls, floor and roofs



Ilan-Lael - Julian, CA - Hubbell & Hubbell Architects

Ilan-Lael - Julian, CA - Hubbell & Hubbell Architects

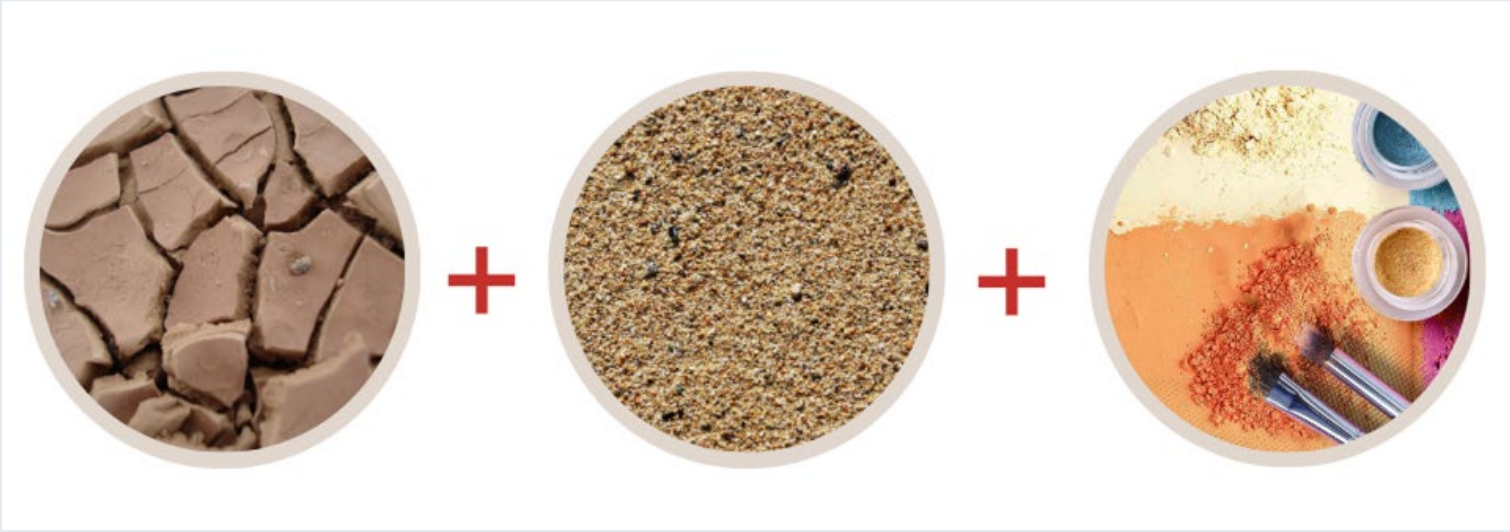
NATURAL PLASTER / EARTHEN PLASTER

Materials:

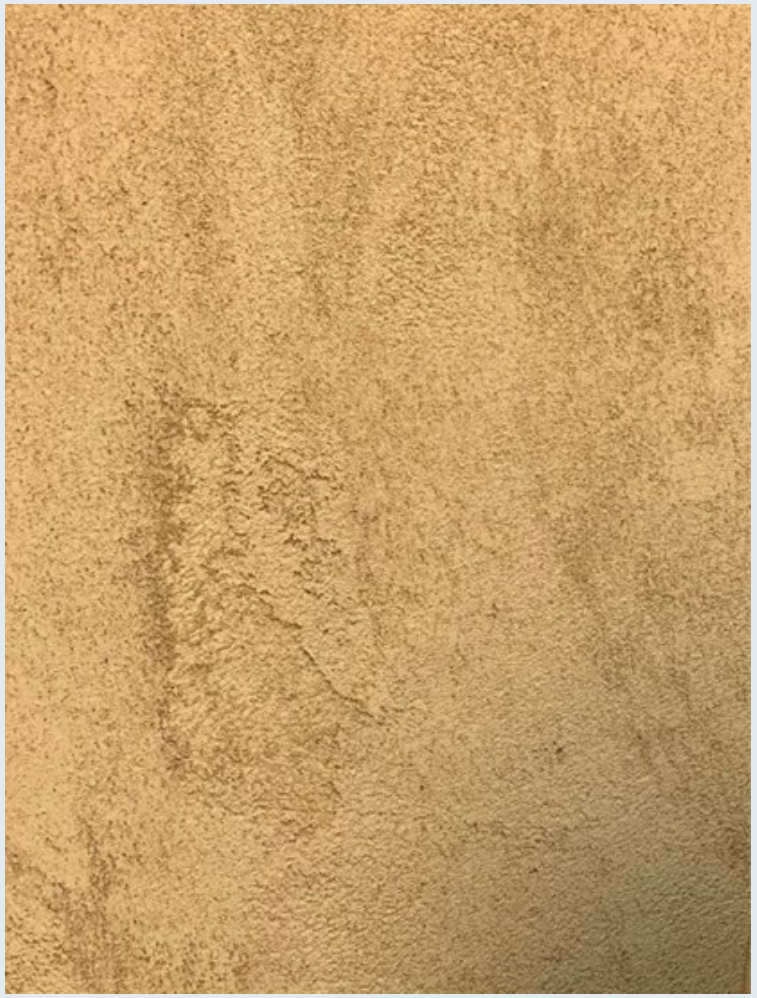
Made from natural ingredients - clay, sand, and mineral pigment.

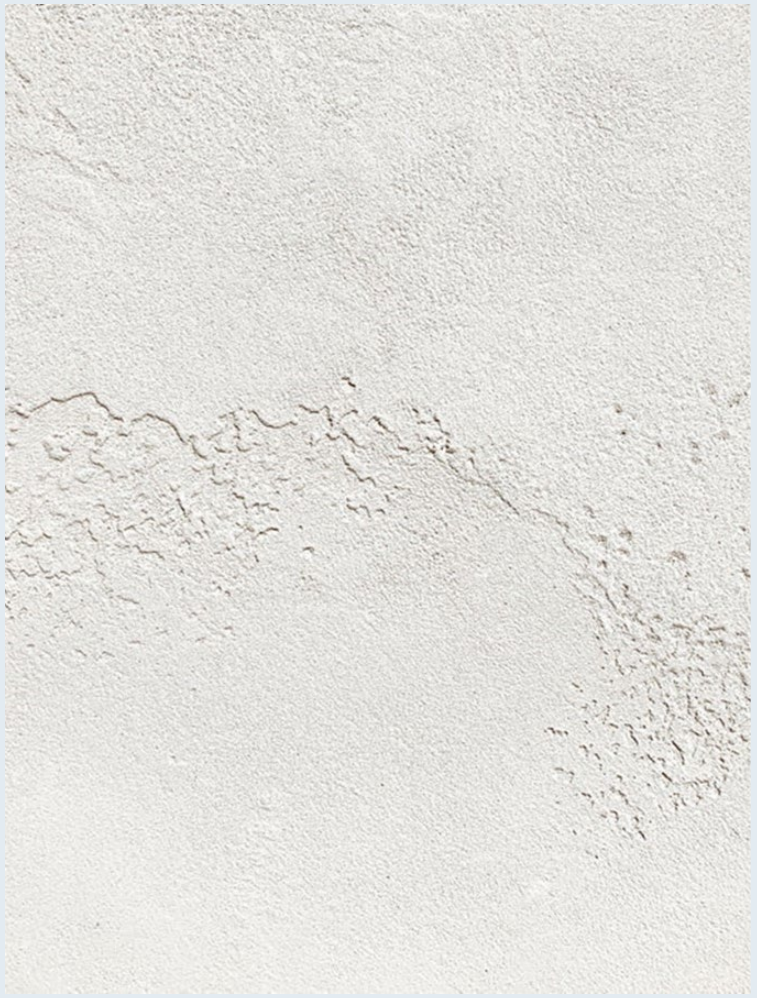
Benefits:

- Sustainable, low-embodied energy
- Natural and non-toxic
- Fire-resistant
- Creates a healthier space
- Beautiful & customizable



NATURAL PLASTER / EARTHEN PLASTER





Examples of natural plaster finishes on buildings by Hubbell & Hubbell Architects

LIME WASH

Materials:

Made from natural ingredients – marble dust, water, and non-hydraulic hydrated lime.

Benefits:

- Natural and non-toxic
- Creates a healthier space
- Beautiful & customizable

Kubicek Residence - Temecula, CA - Hubbell & Hubbell Architects

COLLABORATIVE AND SUSTAINABLE PHILOSOPHY

[PRIORITY ONE PROJECTS]

EVERYTHING IS CONNECTED

WE ARE ALL PART OF THE WHOLE

WE ARE ALL DEFINED AS

PART OF THE LARGER WHOLE

WHAT AFFECTS ONE, AFFECTS ALL

EXPANDING THE CONCEPT OF SUSTAINABILITY

Sustainability in construction usually focuses on design and materials

BUT…

- By taking a more holistic approach, we can create more value in sustainability by focusing on the **PROCESS** as well as the **PRODUCT**
- I developed the concept of **COLLABORATIVE CONSTRUCTION** and I use this concept on all my projects

COMPETITIVE CONSTRUCTION

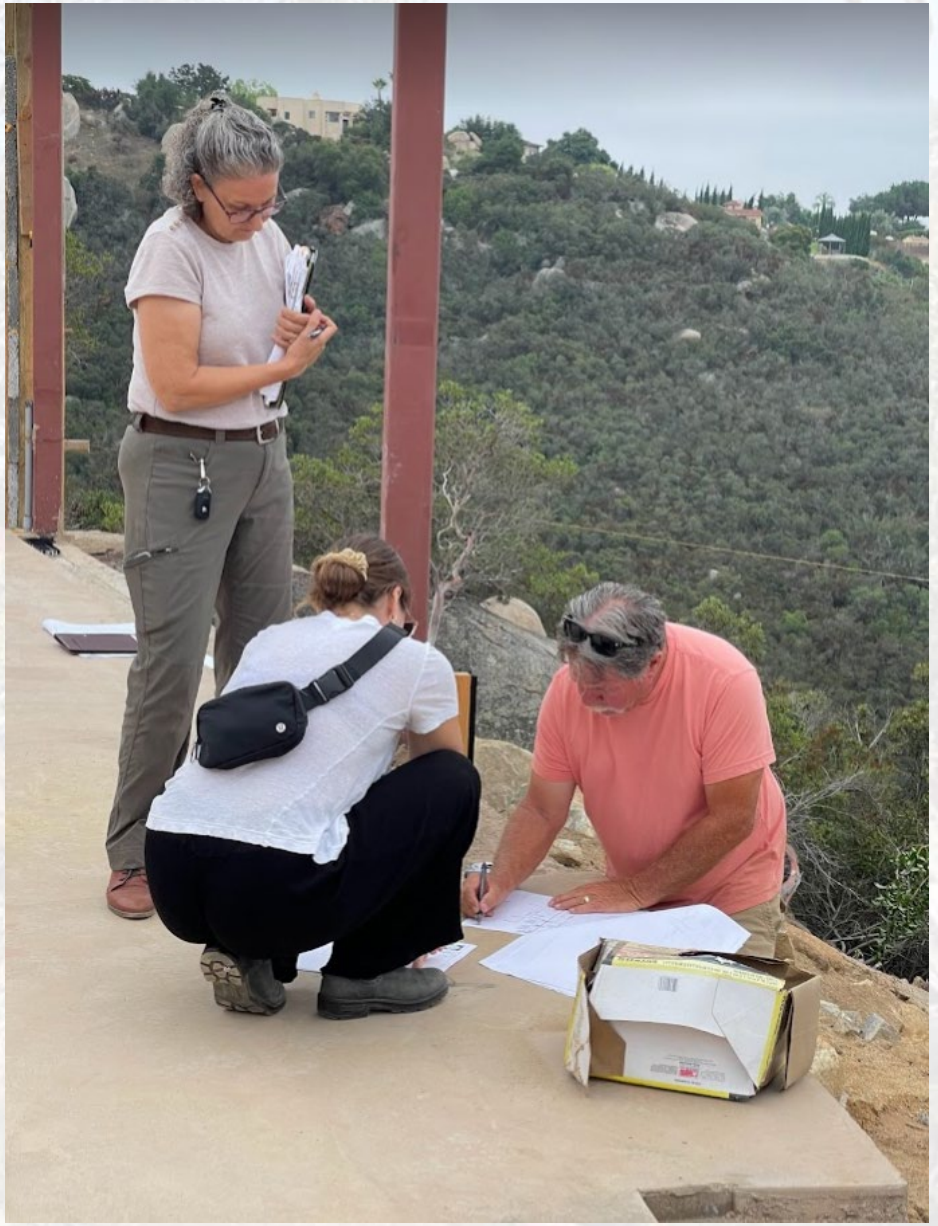
- Old school
- Sealed bids
- Multiple proposals
- Lack of transparency & trust
- **The goal is to avoid conflict, but in the end, you have more conflict, less trust and a final product which is often not the best that it can be.**

COLLABORATIVE CONSTRUCTION

- Team approach: everyone at the table has a voice
- Open communication & trust
- Shared objectives
- Lasting relationships
- **Focuses on the process of construction and through that focus, it also betters the final product.**

BENEFITS OF COLLABORATIVE CONSTRUCTION

- **Eliminates conflict**
  - Architect endeavors to protect their design
  - Contractor endeavors to protect their budget
  - Client endeavors to protect their interests
  - Avoids one of the costliest aspects of construction: conflict & litigation
- **Stimulates creativity and ingenuity**
  - Integrative design approach but into the entire construction process
  - More effective problem solving
- **Addresses a broader cost perspective (more than just monetary)**
  - Integrative design approach but into the entire construction process
  - More effective problem solving



COLLABORATIVE CONSTRUCTION & SUSTAINABILITY

Consistent with the client's values and objectives of sustainability

- Clients concerned about sustainability have a broader perspective than just hard costs and want to have a positive impact on the world
- The collaborative construction process ensures that this positive impact begins early on and carries through all stages of construction
- Sustainability is created through long term relationships between every party involved

THE SERENITY PROJECT

[A CASE STUDY]

PROJECT CONCEPT & GOALS

- “The Museum of Imagination”
- Create a model resilient, green home
- Honor the natural contours of the environment
- Give homage to the indigenous cultures of the region
- Inspire others to build green
- Create a memorable experience for visitors to immerse themselves into a unique and beautiful home surrounded by nature

LOCATION & SITE CONDITIONS

Escondido, CA

TOPOGRAPHIC SURVEY

A TOPOGRAPHIC SURVEY OF A PORTION OF LOT 17, MAP No. 13590, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA.

ACAD NOTE:

LAYERS 0,1,2 & 3 CONTAIN THE ORIGINAL SURVEY DATA AND MAY BE TURNED ON OR OFF FOR CLARITY.THIS FILE HAS BEEN SENT WITH THE NOTED LAYERS TURNED OFF.

LEGEND

- indicates manzanita bush
- indicates oak tree
- 1570 — indicates contour (10'interval)
- sheet rock — indicates monolithic sheet rock (granite)
- indicates loose in place granite rock
- s — indicates 2" sewer main (pressure) per TM-04736-1

THIS SURVEY HAS UTILIZED MAP No. 13590 FOR SURVEY DATA NOTED ON THIS MAP. IN ADDITION, T.M. 04736-1 HAS BEEN USED FOR DETERMINATION OF ELEVATIONS NOTED HEREON, AND UNDERGROUND IMPROVEMENTS AS SHOWN ON T.M. 04736-1.

THIS MAP WAS COMPILED FROM DATA OBTAINED BY A FIELD SURVEY, CONDUCTED BY ME, ON THE GROUND, AND CORRECTLY LOCATES EXISTING FEATURES AS NOTED HEREON WITH RESPECT TO PROPERTY LINES AS NOTED.

12/30/21

DONALD F. DRESSELHAUS II, PLS 5112

LICENSED LAND SURVEYOR
DONALD F. DRESSELHAUS II
No. LS 5112
Exp. 6/30/23
CALIFORNIA

DRESSELHAUS SURVEYING
31034 VALLEY CENTER ROAD
VALLEY CENTER, CA 92082
760-212-0197
email:donalddresselhaus@att.net

JOB LINE BASE TOPO BNDRY.DWG
12.30.21

ROCKS, BOULDERS & OUTCROPS

NATURAL HABITAT

SITE CHALLENGES

DESIGN OVERVIEW

Strategies:

- Preservation of existing site – boulders & vegetation
- Windows take advantage of daylight and views
- Operable windows & cross ventilation
- Shading devices – roof overhang, light shelves, trellis
- Thermal mass - boulders
- Solar energy – solar panels on garage roof
- Cool roof – reflects sun & prevents solar heat gain

Materials:

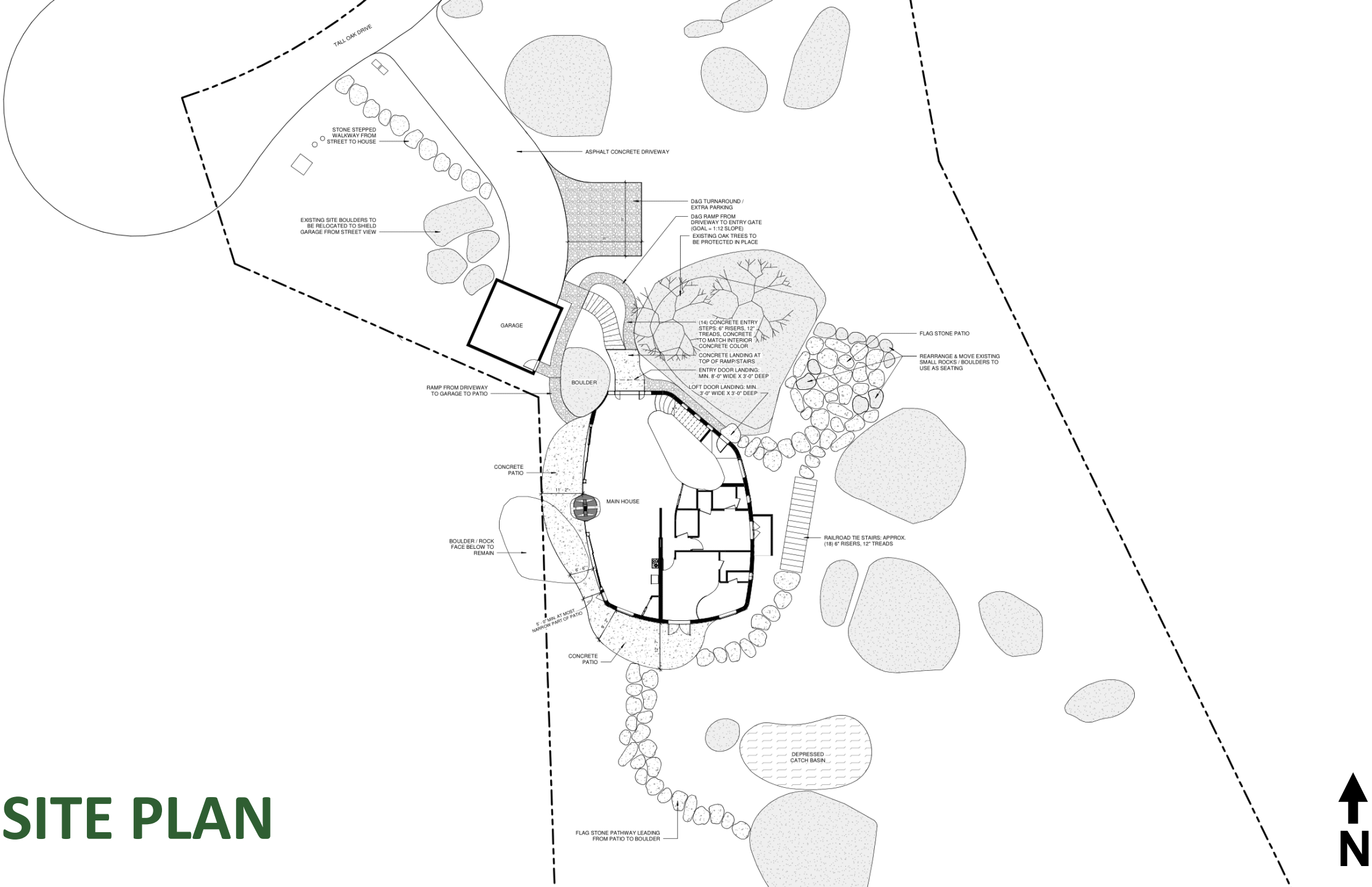
- ICCF
- Foam Sandwich Panels
- Natural plaster

Other details:

- Soft corners, no harsh edges
- Natural finishes – bamboo, wood
- UV / Ozone spa – kills germs & prevents algae build-up without the use of “unhealthy” materials

Project team:

Hubbell and Hubbell Architects, Ed Earl, Joi Lin Blake, David Morelock, Lawrence Construction, and Morgan Structural Engineering


TALL OAK DRIVE
STONE STEPPED WALKWAY FROM STREET TO HOUSE
ASPHALT CONCRETE DRIVEWAY
D&G TURNAROUND / EXTRA PARKING
D&G RAMP FROM DRIVEWAY TO ENTRY GATE (GOAL = 1:12 SLOPE)
EXISTING SITE BOULDERS TO BE RELOCATED TO SHIELD GARAGE FROM STREET VIEW
EXISTING OAK TREES TO BE PROTECTED IN PLACE
GARAGE
(14) CONCRETE ENTRY STEPS: 6" RISERS, 12" TREADS, CONCRETE TO MATCH INTERIOR CONCRETE COLOR
CONCRETE LANDING AT TOP OF RAMP/STAIRS
ENTRY DOOR LANDING: MIN. 8'-0" WIDE X 3'-0" DEEP
LOFT DOOR LANDING: MIN. 3'-0" WIDE X 3'-0" DEEP
BOULDER
RAMP FROM DRIVEWAY TO GARAGE TO PATIO
FLAG STONE PATIO
REARRANGE & MOVE EXISTING SMALL ROCKS / BOULDERS TO USE AS SEATING
CONCRETE PATIO
11' - 2"
MAIN HOUSE
BOULDER / ROCK FACE BELOW TO REMAIN
RAILROAD TIE STAIRS: APPROX. (18) 6" RISERS, 12" TREADS
6' - 6"
5' - 7" MIN. AT MOST NARROW PART OF PATIO
CONCRETE PATIO
DEPRESSED CATCH BASIN
FLAG STONE PATHWAY LEADING FROM PATIO TO BOULDER
N

SITE PLAN

FLOOR PLAN

VIEW OF WEST FACADE

VIEW OF WEST FACADE

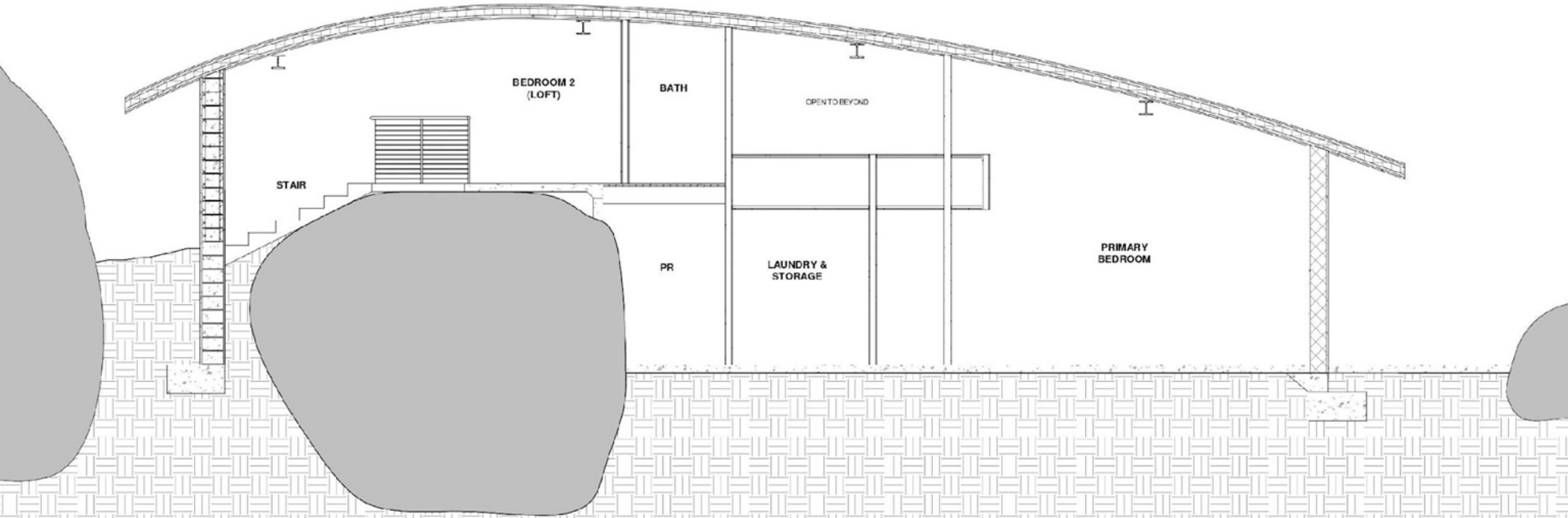
SUN STUDIES

12:00 PM

12:00 PM

6:00 PM

6:00 PM



BUILDING SECTION

VIEW OF ENTRY AND GARAGE

VIEW OF ENTRY AND GARAGE

VIEW OF ENTRY AND GARAGE

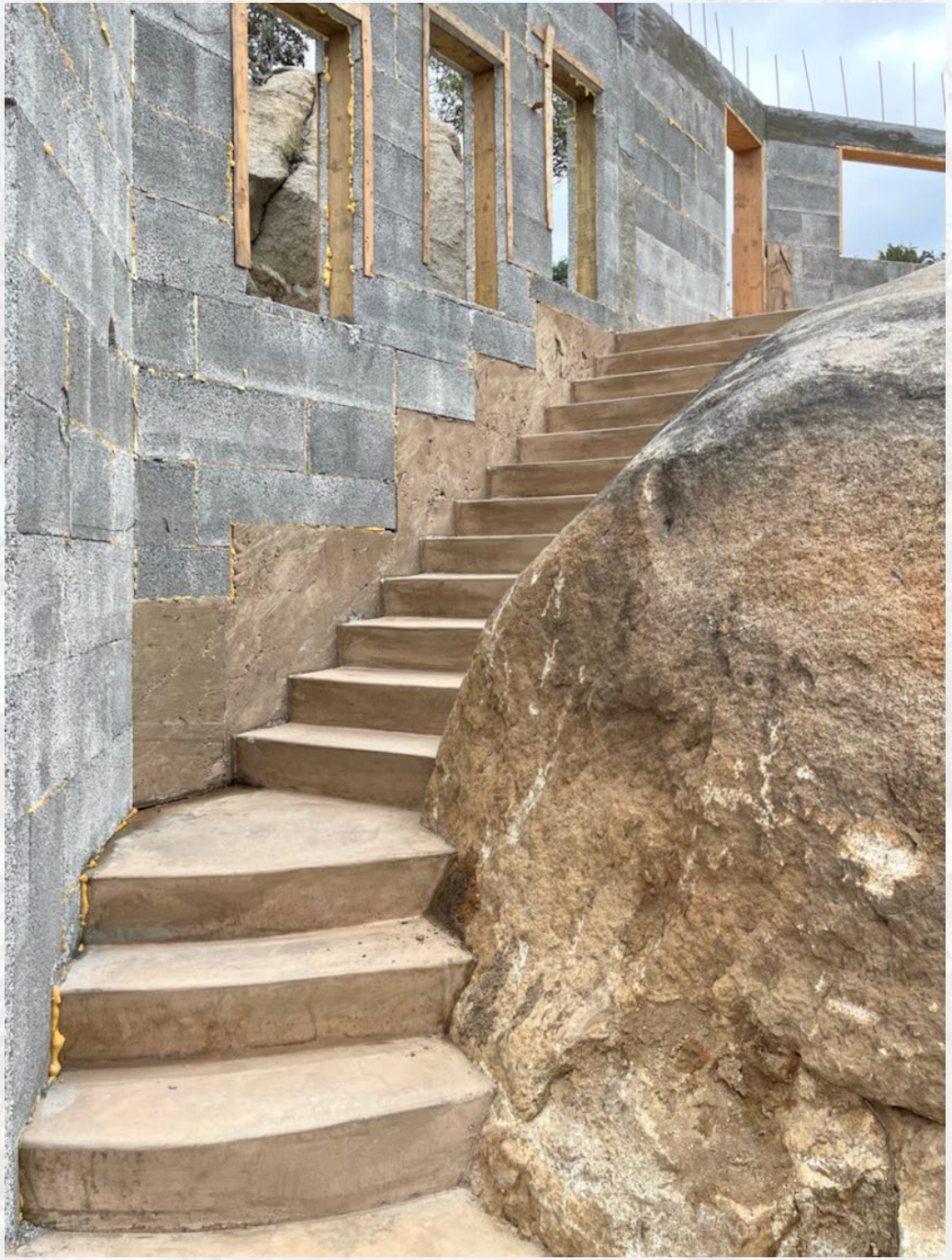
VIEW OF ENTRY AND GARAGE

GREAT ROOM / LOFT

GREAT ROOM / LOFT

GREAT ROOM / LOFT

GREAT ROOM / LOFT




Hubbell and Hubbell Architects
& The Zen Builder: Ed Earl