CASE STUDY 2.0
REBUILDING LOS ANGELES

A Visionary Catalog for Resilent and Sustainable Homes

SOLKATT

INTRODUCTION

SOLKATT













COMPANY / FIRM SUMMARY

At Solkatt, we don't just design homes — we design experiences that endure.

Founded in Los Angeles in 2021, our firm was built on the belief that architecture should be as personal as it is powerful — rooted in sustainability, shaped by context, and delivered with integrity from start to finish.

We are a tight-knit team, each bringing our area of expertise in architecture, design, sustainable systems, and high-end project delivery. What makes us different isn't just our technical skill — it's how deeply we listen.

Every project begins with a conversation, and from that, we craft tailored, functional works of art that reflect both the spirit of the site and the story of the project. Our portfolio spans some of California's most challenging and breathtaking terrain — from a simple LA backyard to the coastal enclaves of Playa del Rey to the raw beauty of the High Desert.

We excel in complex conditions: fire resilience, hillsides, view corridors, and sustainability. These qualities of a project aren't obstacles to us — they're invitations to innovate.

What sets Solkatt apart is our ability to merge the visionary with the buildable.

Our projects are more than beautiful — they perform. They breathe. They last. And, they're built for the way people live today — and tomorrow. In every structure, we embed resilience, intention, and grace — because we believe home should be an extension of you.

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11813 Major Street
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PROJECT NARRATIVE

This architectural design draws inspiration from the legacy of pioneering architects Rudolph Schindler and Richard Neutra, whose iconic Kings Road House (1924) became a Southern California landmark through its use of simple, honest materials and modernist principles. Embracing this tradition, the proposed design integrates clean lines, functional spaces, and a seamless connection between indoor and outdoor environments—hallmarks of California modernism.

The exterior features mass walls constructed from Compressed Earth Block (CEB), a contemporary evolution of traditional adobe, chosen for its thermal performance, fire resistance, and sustainability. These walls provide passive temperature regulation, keeping interiors cool in summer and warm in winter while offering superior fire protection—a critical consideration in wildfire-prone regions. The second-floor walls transition to plaster, combining cost-effective fire-rated assemblies, including exterior stucco and interior Type-X gypsum board, to achieve a 1-hour fire-rated envelope for the entire structure. Roof design plays a crucial role in fire resilience. Observations from wildfire-affected areas reveal that structures with flat roofs and minimized eaves are more likely to survive, as exposed wood eaves can ignite. By eliminating traditional eaves and incorporating a fire-rated exterior wall system, the design significantly reduces vulnerability to fire spread.

Beyond performance, the design prioritizes sustainability through passive systems such as evaporative cooling, high thermal mass, and phase change capabilities—features that conventional materials like cement, polystyrene, and wood cannot replicate. The result is a home that harmonizes with its environment while offering durability, energy efficiency, and timeless aesthetic appeal.

PARCEL INFO & DIAGRAMS

ADDRESS: 1037 N ILIFF STREET

BUILDING AREAS

RESIDENTIAL FLOOR AREA IN SQUARE FEET	
LEVEL 1	2,223
LEVEL 2	1,677
BASEMENT OPTION	1,667
LEVEL 1 - OVERHANG	0
LEVEL 2 - OVERHANG	0
SUBTOTAL WITH BASEMENT	5,567
DOUBLE HEIGHT SPACE EXEMPTION	0
COVERED PORCH EXEMPTION	0
GARAGE EXEMPTION	-200
BASEMENT EXEMPTION	-1,667
GRAND TOTAL	3,900
MAXIMUM ALLOWED	3,900 PER PPCL HOA

PROJECT DESCRIPTION

NEW TWO STORY SINGLE FAMILY RESIDENCE WITH OPTIONAL BASEMENT.

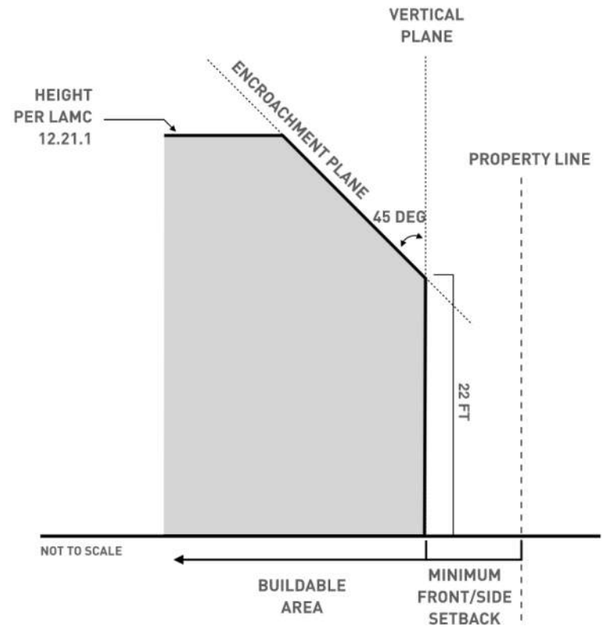
3 BEDROOMS
3.5 BATHROOMS
2 CAR GARAGE

2047 SQUARE FEET AT FIRST FLOOR PLUS 442 SQUARE FOOT GARAGE AND
1806 SQUARE FEET AT SECOND FLOOR

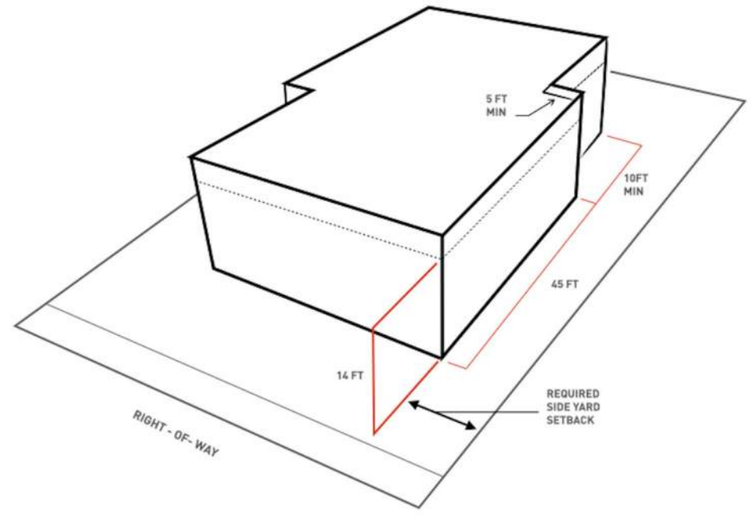
PROJECT DATA

SITE ADDRESS	1037 N ILIFF STREET
LOT AREA	6,500 SQ FT
ZONING	R1V1
MAXIMUM ENVELOPE HEIGHT	28’-0”
ADDITIONAL HEIGHT REQUIREMENTS	ENCOACHMENT PLANE. SEE DIAGRAM
MAX STRUCTURE HEIGHT PROVIDED	28’
SETBACK REQUIREMENTS	FRONT YARD: 25’-0”
	SIDE YARD: 6’-0”
	REAR YARD: 15’-0”
PARKING REQUIREMENTS	2 GARAGE SPACES (8’-6” x 18’)
LOT COVERAGE	MAX ALLOWABLE COVERAGE: 48%

BUILDING HEIGHT DIAGRAM



BUILDING ENVELOPE AND SETBACK DIAGRAM



COMPRESSED EARTH BLOCK SUSTAINABLE. LOCAL. NON-COMBUSTIBLE

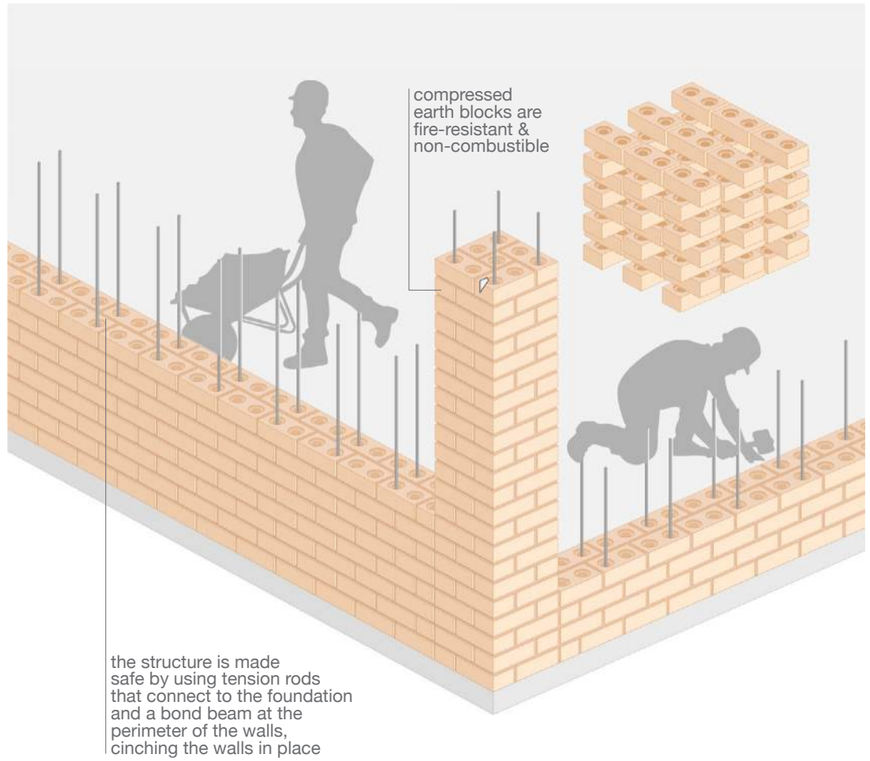
The construction approach for this project leverages Compressed Earth Block (CEB) masonry, a time-tested building method with roots in California's early adobe structures. CEBs are composed of clay, sand, aggregate, and water, compacted under high pressure into dense, durable blocks. Unlike conventional fired bricks or concrete masonry, CEBs require minimal energy to produce, contain low embodied carbon, and can be sourced and manufactured locally—making them an eco-friendly and cost-effective alternative.

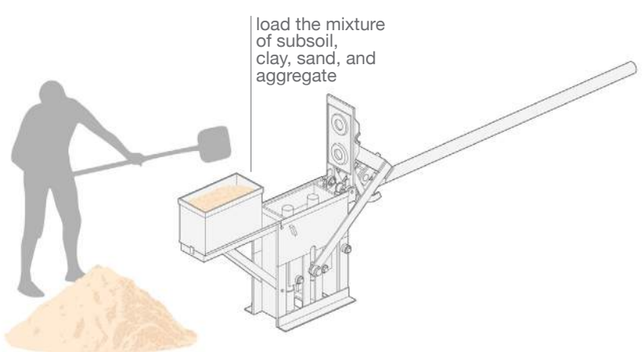
Structurally, the CEB walls are reinforced with steel and stabilized with a small amount of cement, then capped with a concrete bond beam at the top. Tension rods are tightened post-construction, creating a compressed structural system that enhances seismic and wind resistance. This method effectively transforms the masonry into a load-bearing system under permanent compression, proven to meet California's stringent building codes.

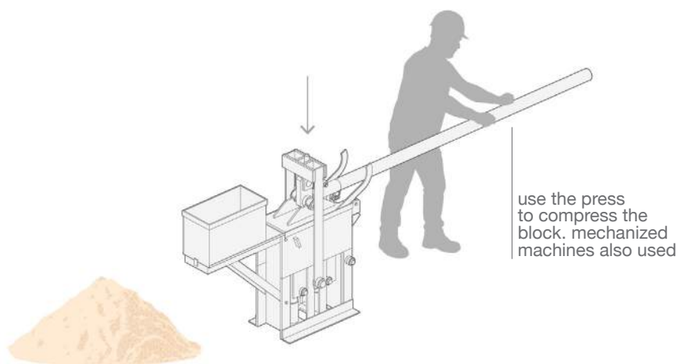
For fire resistance, the design combines CEB mass walls on the lower level with lightweight plaster and fire-rated assemblies (stucco exterior + Type-X gypsum interior) on the upper floor, ensuring a 1-hour fire-rated envelope. Additionally, the elimination of eaves and use of a fire-resistant flat roof further mitigate wildfire risks—a critical adaptation gleaned from studying structures that survived recent wildfires.

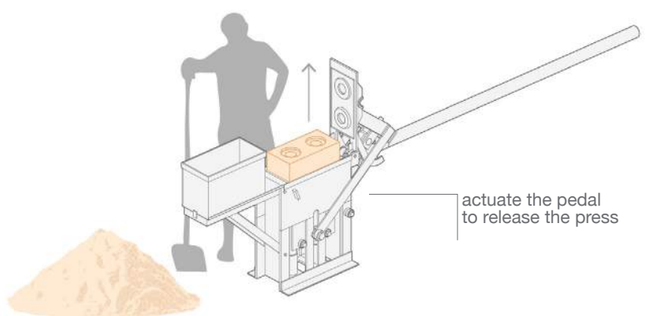
Several homes in Southern California have already been approved and constructed using this methodology, demonstrating its feasibility and resilience. By embracing low-carbon materials, passive energy systems, and fire-smart construction, this project represents a forward-thinking approach to sustainable, disaster-resistant building in Los Angeles.

DESIGN FEATURES









PLANS

SITE PLAN

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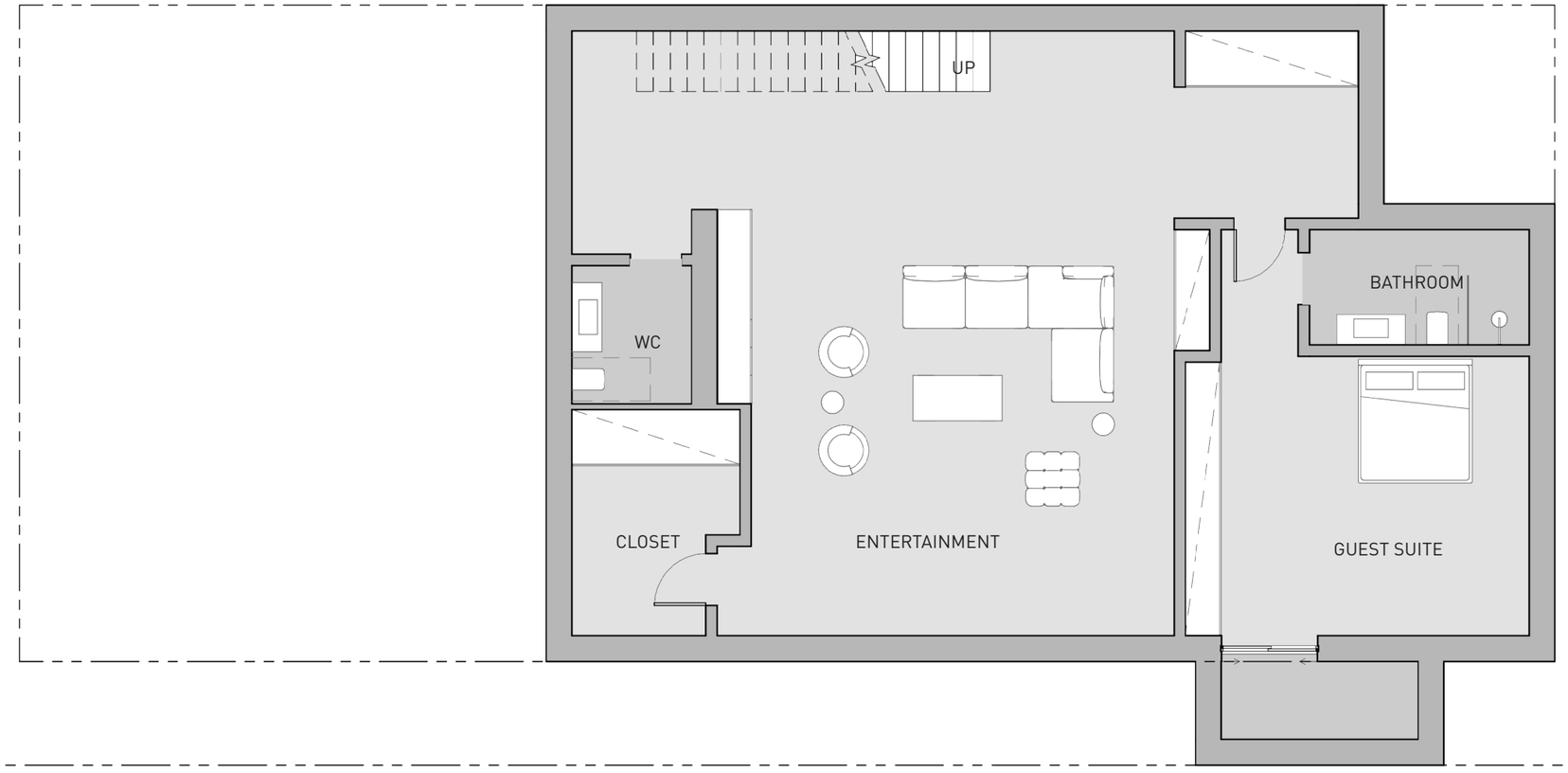
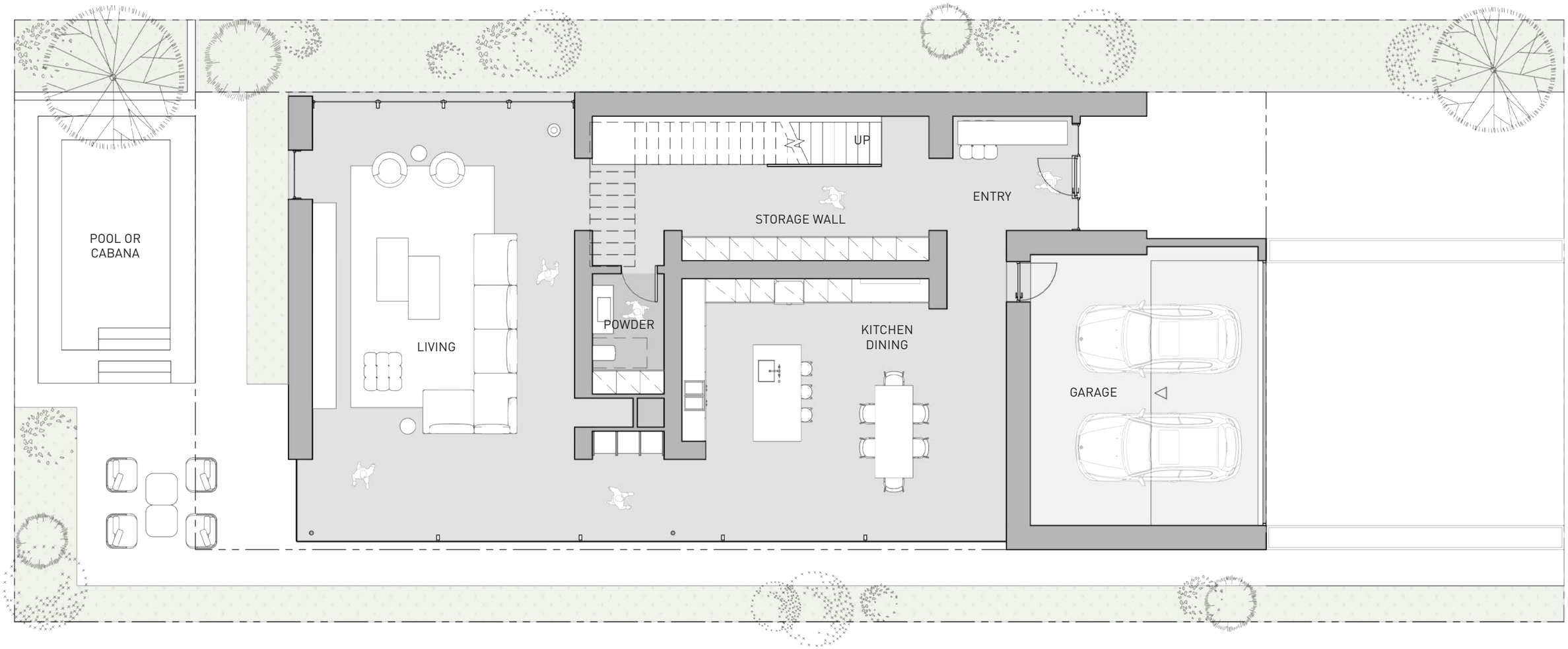
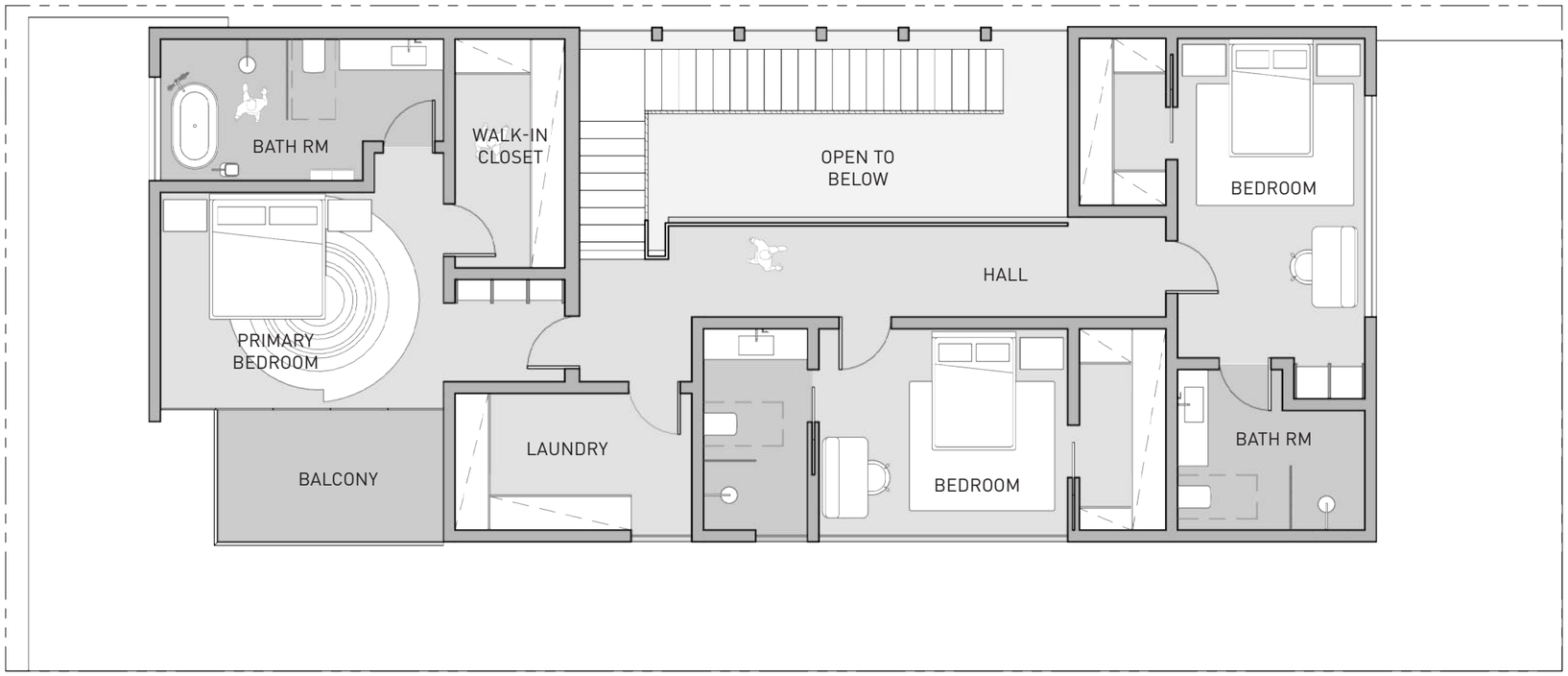
BASEMENT PLAN



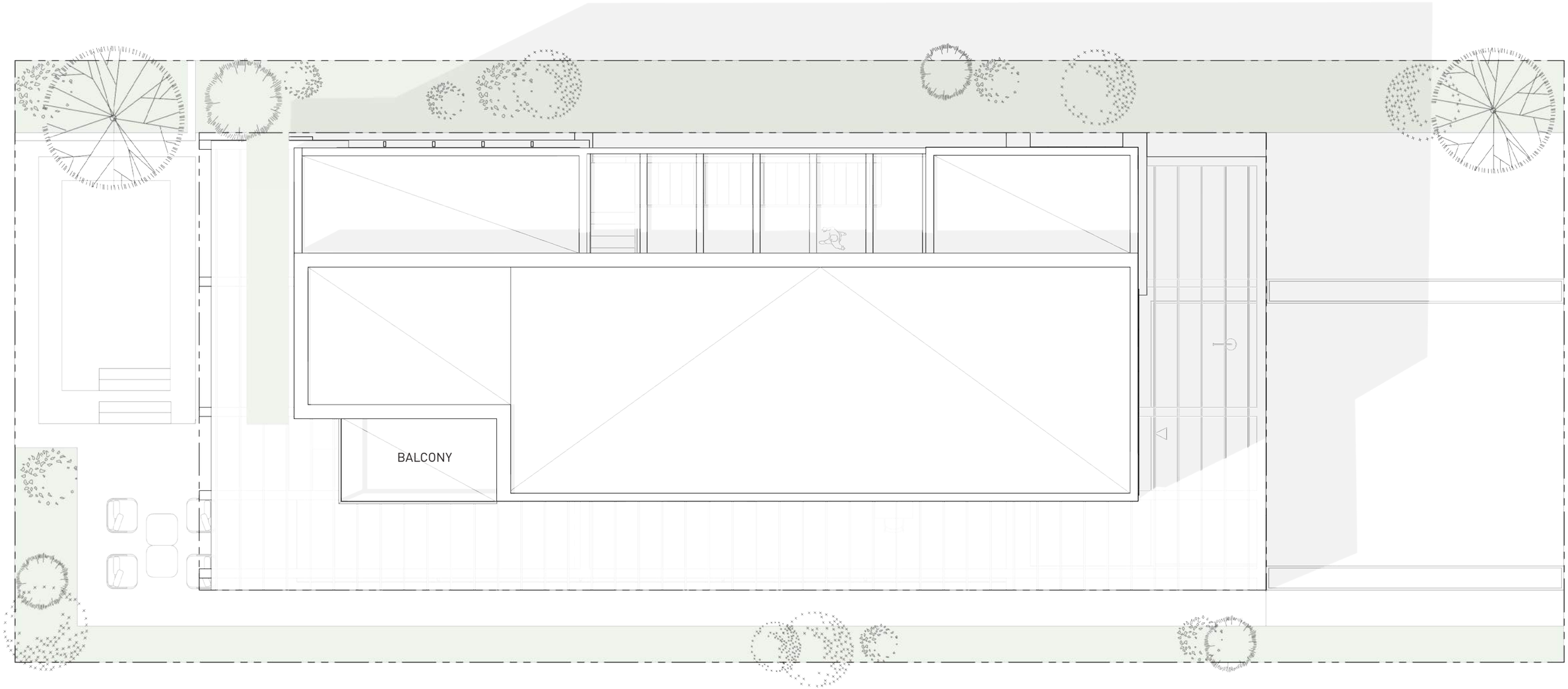
GROUND LEVEL



SECOND LEVEL



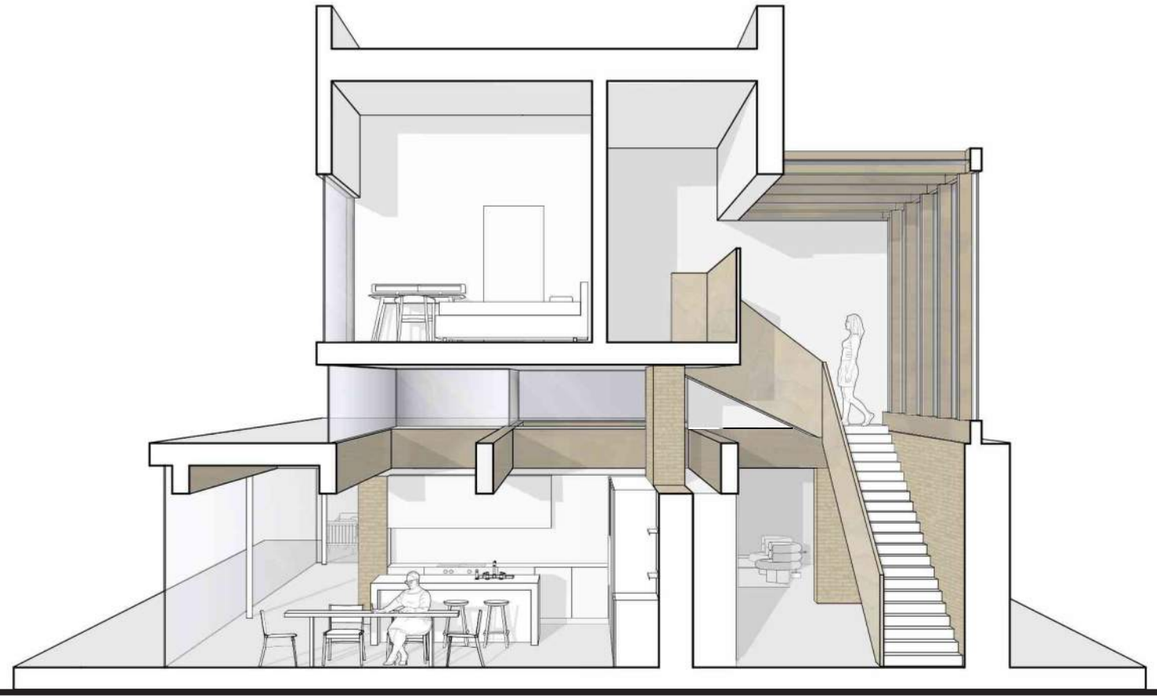
ROOF



SECTIONS

LONGITUDINAL

TRANSVERSE

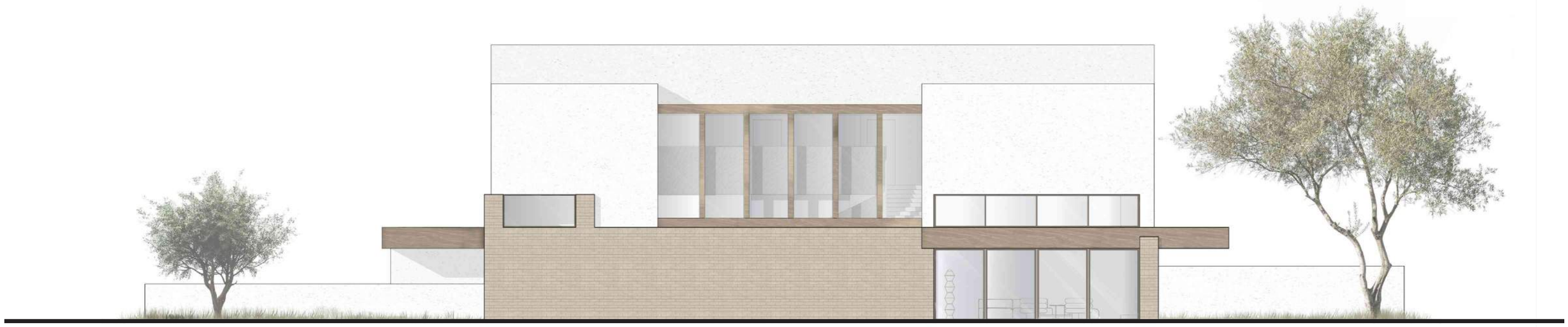


ELEVATIONS

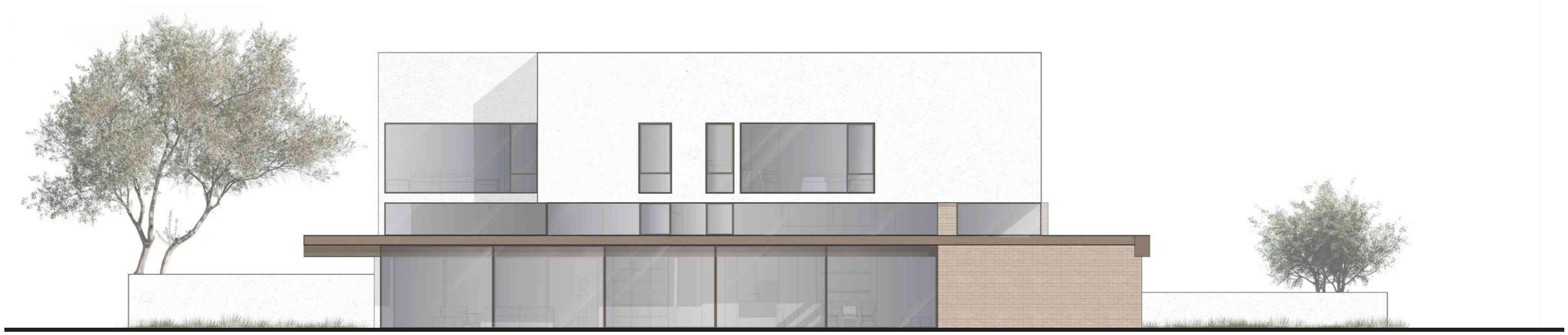
NORTH

SOUTH

EAST



WEST



RENDERINGS

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