

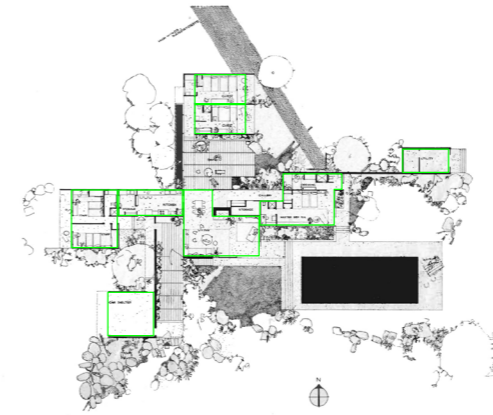


KAUFMANN DESERT HOUSE Richard Neutra 1946-1947
470 West Vista Chino, Palm Springs, CA 92262

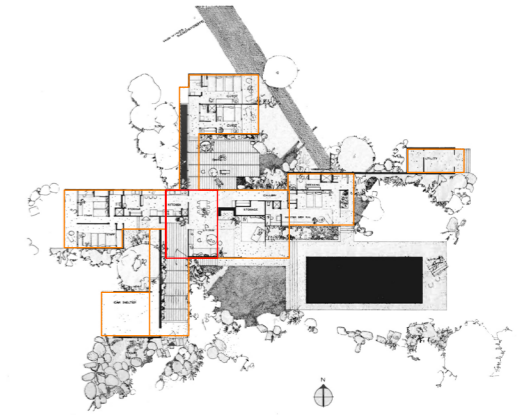
VOLUMETRIC AND MATERIALITY ANALYSIS

TK55 analysis of residential architecture-single houses

VOLUMETRIC ANALYSIS Volumes



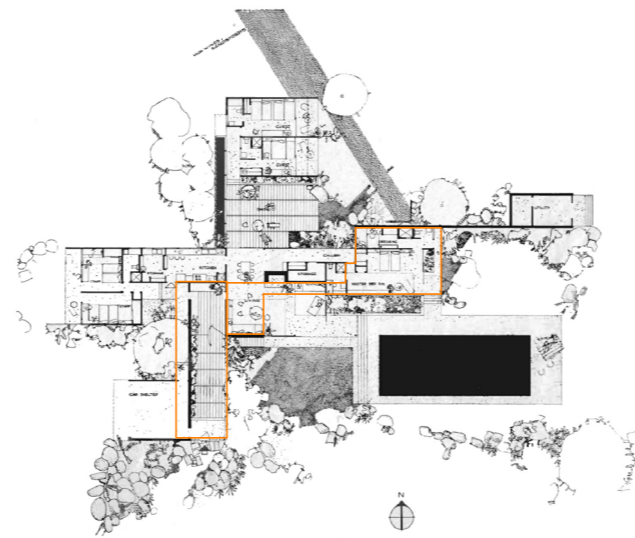
Functional program



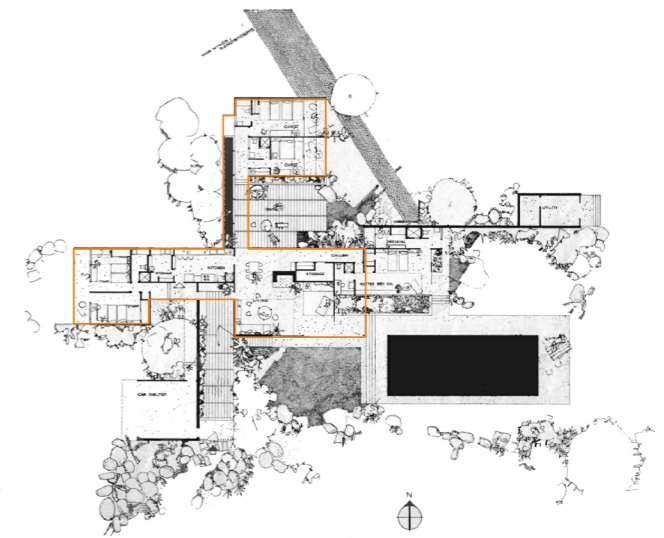
Roofs



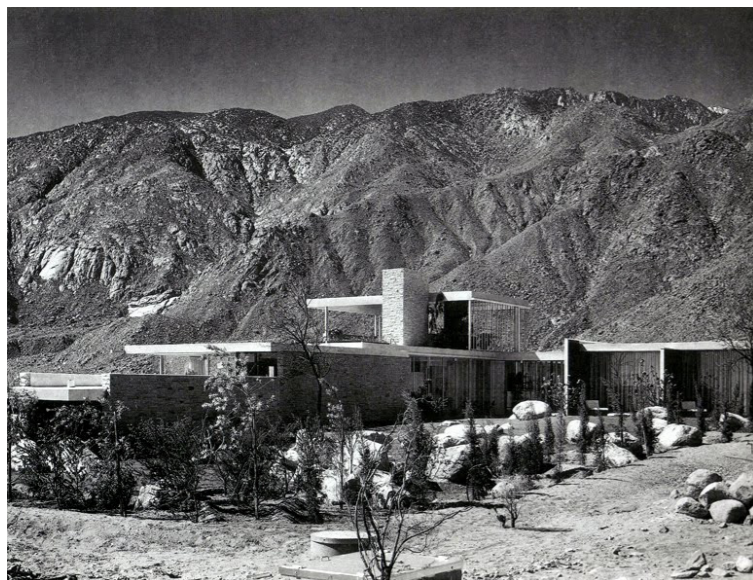
Free height 1,96 m



Free height 2,40 m



Free height 2,60 m



Ground level-Functional program-Volumes

Mechanism, a structure carried in several parts manufactured in a workshop.

The light slab planes define the geometry of volumes, carefully overlapped. The only element that takes a vertical position is the rooftop space flanked by a chimney. This space is like a semi-opened porch that Neutra used to call it "gloriette".

Neutra wanted to bring back the spirit of the flat-roofed with mudbrick boulders houses from the early inhabitants of the nearby 'desert states' New Mexico and Arizona.

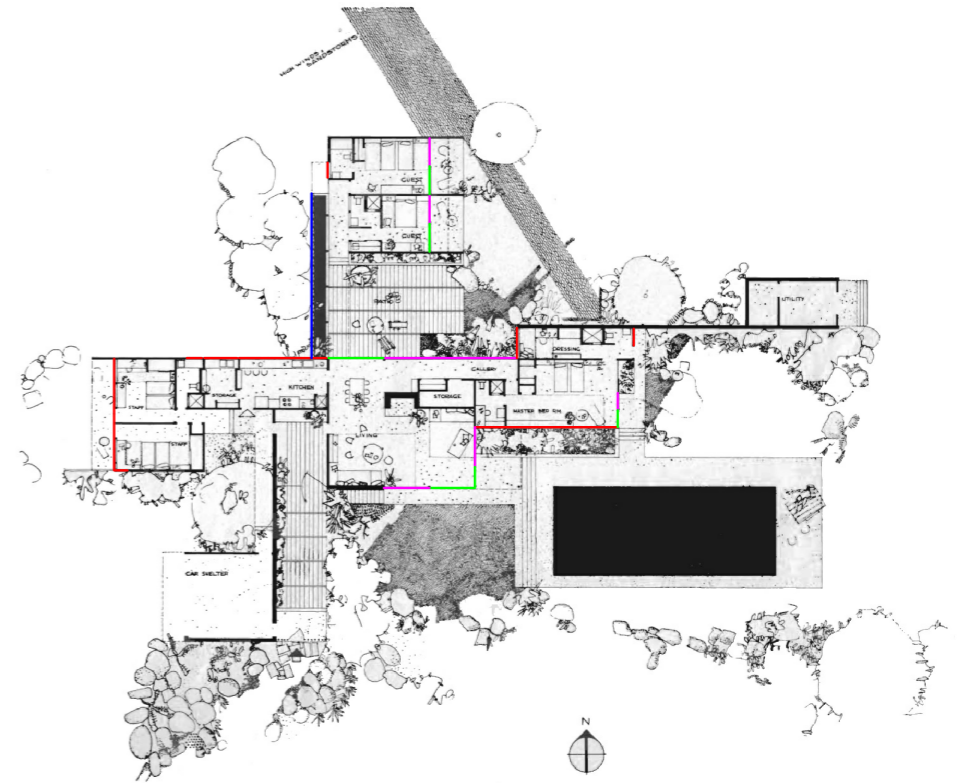
Cross-shaped plan with five parts that extends from the living room.

The lowest level of the pool and the cantilevers make sense to be in a place isolated from neighbours.

VOLUMETRIC ANALYSIS Window apertures



Sliding doors Glass panel Aluminium plates Windows

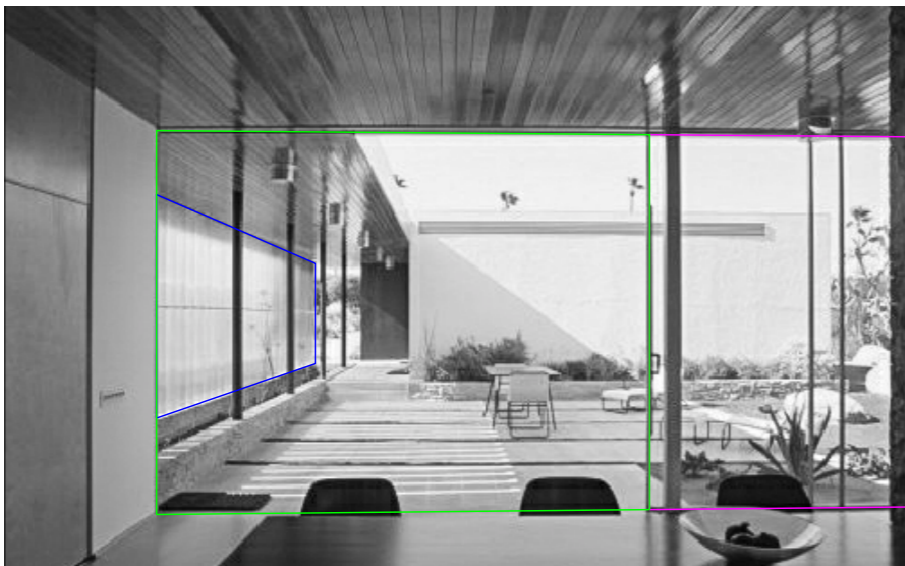


Window apertures

Orientation-Functional program-Window apertures

As much opened and flexible spaces as possible
 North face very closed (protection from wind) and south face very opened (lots of sunlight, used in January)

VOLUMETRIC ANALYSIS Window apertures



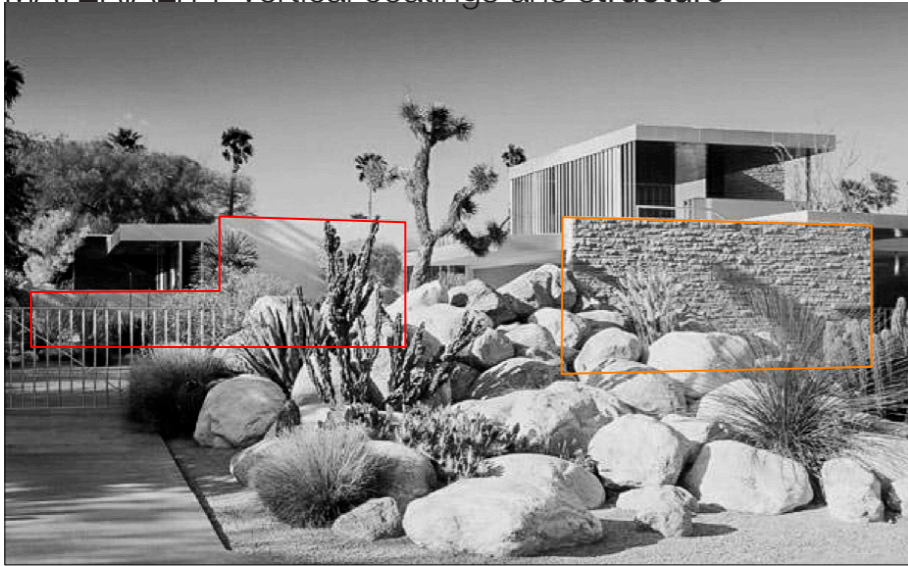
The house is delimited by large windows in the whole perimeter shaped with metal profiles and transparent glass for the entire visualization of the landscape.

Disposition of window apertures is determined by orientation and functional program. Although in this case is influenced by the period of the year the house will be used (mainly in January)

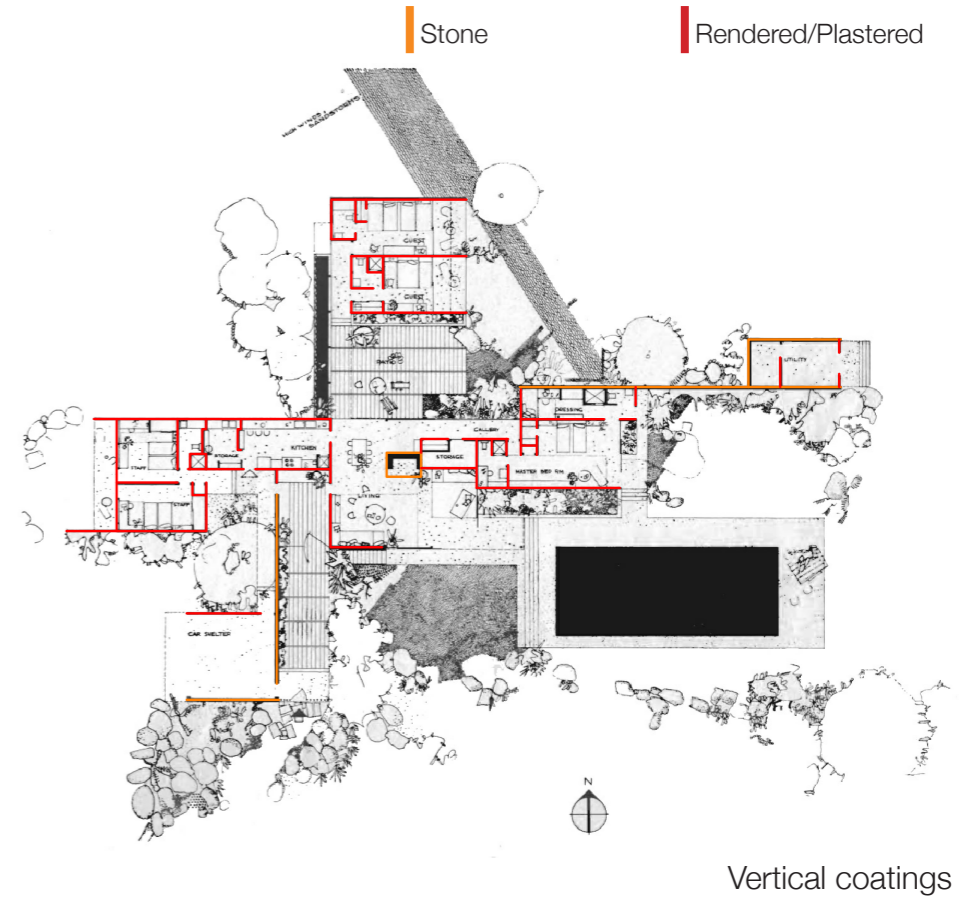
Exterior shading devices consisting of high aluminium plates to keep the house protected from cold and warm winds.

Main rooms - great lighting and ventilation (living room and master bedroom).

MATERIALITY Vertical coatings and structure



OUTDOOR



Vertical coatings

Dry stone masonry used to settle the house in the surrounding landscape (sandstone called "Utah buff") making the house to be integrated in that place.

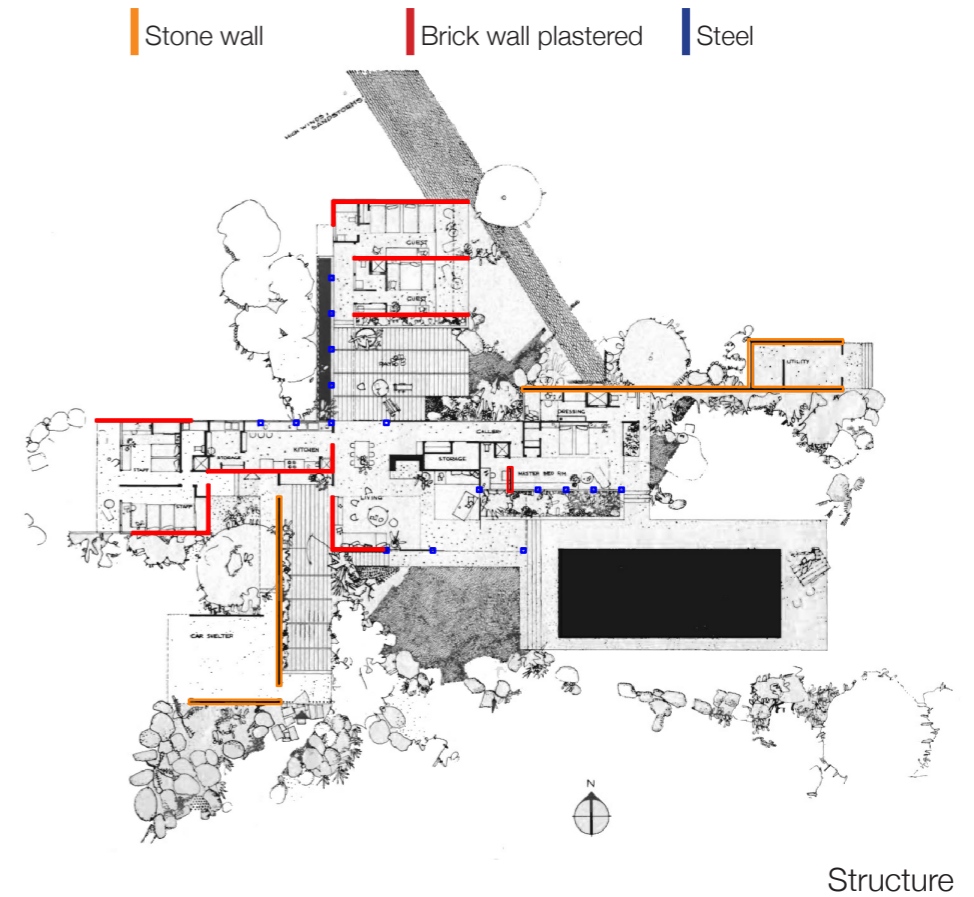
Steel define the structural system of the house as well as it gives a silvered appearance and works/behaves as a separation/boundary between skin and structure.

Vertical flat surfaces of white plaster has a treatment of powdered mica in order to reflect better the light.

MATERIALITY Vertical coatings and structure



INDOOR



Timber structural walls arranged alternatively with steel columns and beams that allow to open the house outdoor.

The structure is an hybrid of steel and wood, like wood framing.

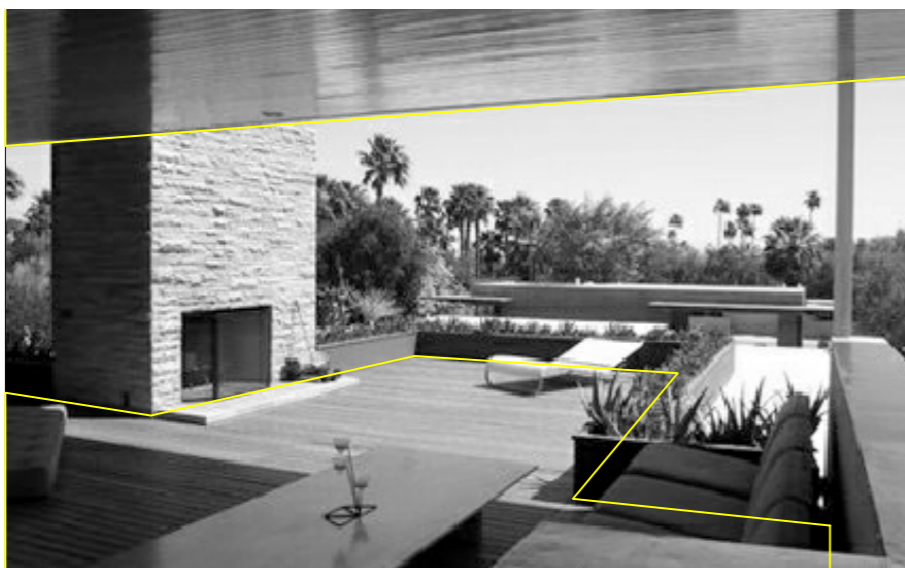
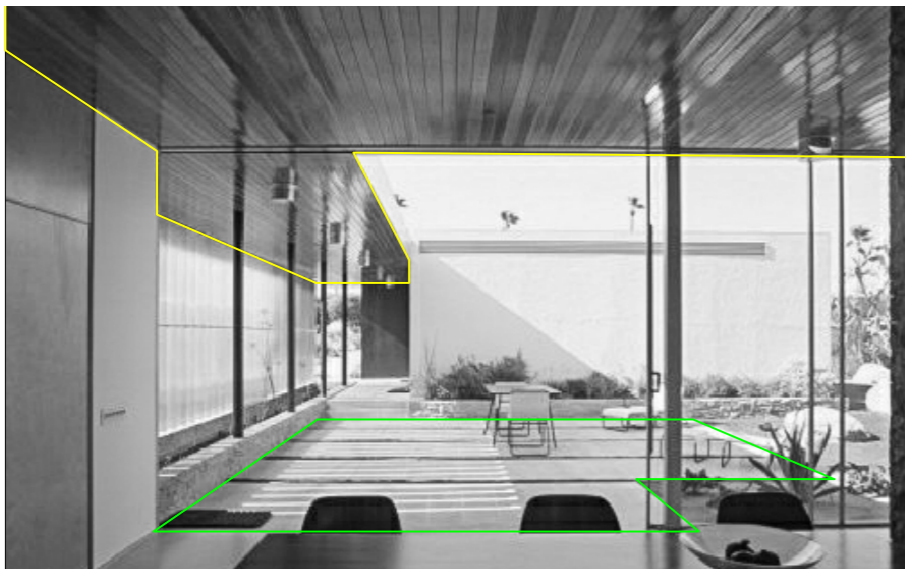
Steel is mostly used in:

- beams and columns used in the "gloriette"
- places where needed to hold large sliders (living room and master bedroom)

Diameter of steel column of 3 inches (7,5 cm).

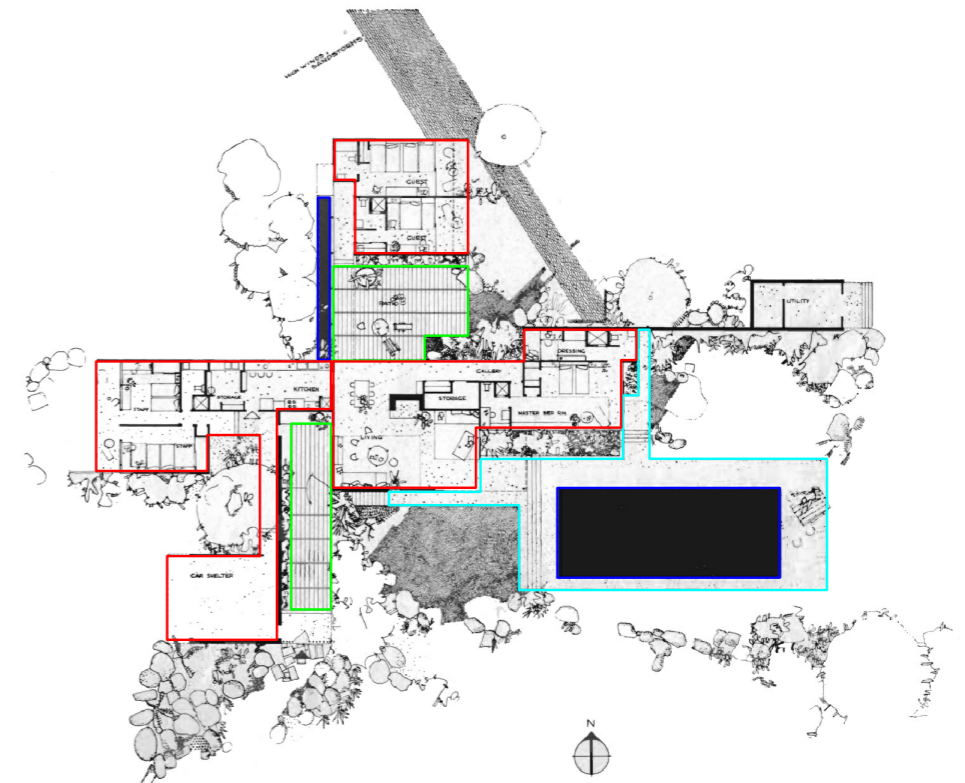
Slab edges coated with metal sheet.

MATERIALITY Horizontal coatings

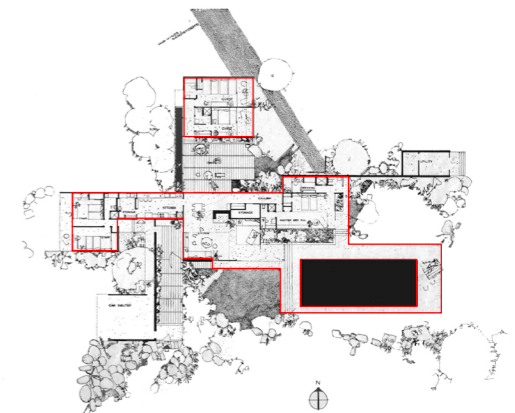


OUTDOOR

Concrete tiles Timber Continuous concrete



Horizontal coatings



Radiant floor heating and cooling system

Linearity noticed by the direction of the pavement and the ceiling showing the entrance to the house.

Radiant floor heating and cooling system consisting of pipes embedded in the floor. Circuit in the inner space and spilling over to outdoor.

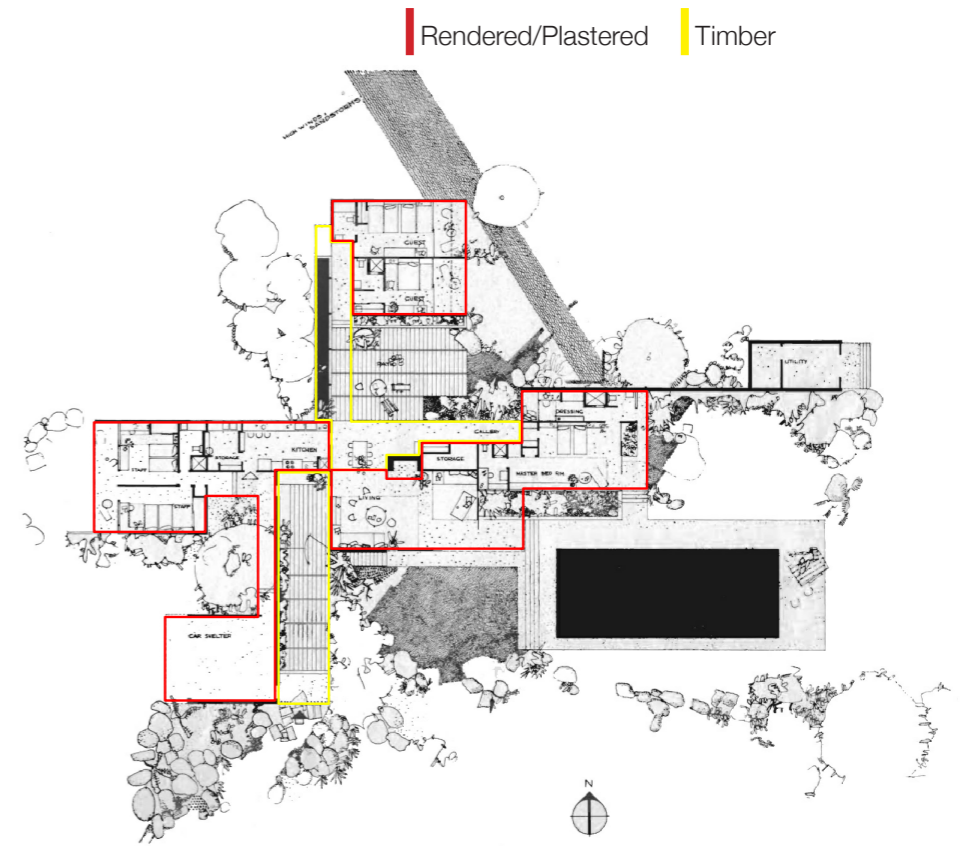
Concrete floor around the swimming pool.

Large concrete tiles at a slight distance from each other, such that they are bordered by the natural grass on all sides and that from the distance look like being continuous.

MATERIALITY Horizontal coatings



INDOOR



Colours used linking to those ones that the desert offer (warm colours)

Mimic the exterior

Use of timber to create contrasts between light and dark.

Outdoor materials show warmth, whereas indoor materials are cool colours.

Floor with continuity between the inside and outside.

Polished concrete interior floors, consisting of white Portland cement paste and fine silica sand.



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