LEGO Architecture

Villa Savoye

Poissy, France

[The house will stand in the midst of the fields like an object, without disturbing anything around it.]

Le Corbusier

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Villa Savoye

Lying on the outskirts of Paris, France, and completed in 1931, Villa Savoye was designed as a private country house by the Swiss-born architect, Le Corbusier. It quickly became one of the most influential buildings in the International style of architecture and cemented Le Corbusier's reputation as one of the most important architects of the 20th century.

Architectural significance

When the construction of Villa Savoye began in 1928, Le Corbusier was already an internationally known architect. His book *Vers une Architecture* (Towards a New Architecture) had been translated into several languages, while his work on the Centrosoyuz Building in Moscow, Russia, had brought him into contact with the Russian avant-garde. As one of the first members of the Congrès International d'Architecture Moderne (CIAM), he was also becoming known as an important and vocal champion of modern architecture. Villa Savoye would be the last in a series of white 'Purist villas' designed and constructed by Le Corbusier and his cousin Pierre Jeanneret in and around the city of Paris during the 1920s. Encouraged by the Savoye family's open brief, Le Corbusier ensured that the design of the house would become the physical representation of his 'Total Purity' ideals.

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The villa was to be constructed according to the emblematic 'Five Points' Le Corbusier had developed as guiding principles for his modernist architectural style:

1. Pilotis, such as columns or pillars, which elevate the building and allow an extended continuity of the garden beneath.

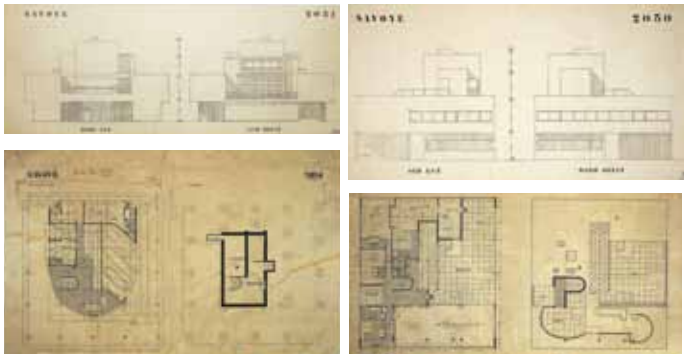
2. Functional roof, serving as a garden and terrace, reclaiming for nature the land occupied by the building.

3. Open floor plan relieved of load-bearing walls, allowing walls to be placed freely and only where aesthetically needed.

4. Long horizontal windows, providing illumination and ventilation.

5. Freely designed façades, serving as only as a skin of the wall and windows and unconstrained by load-bearing considerations.

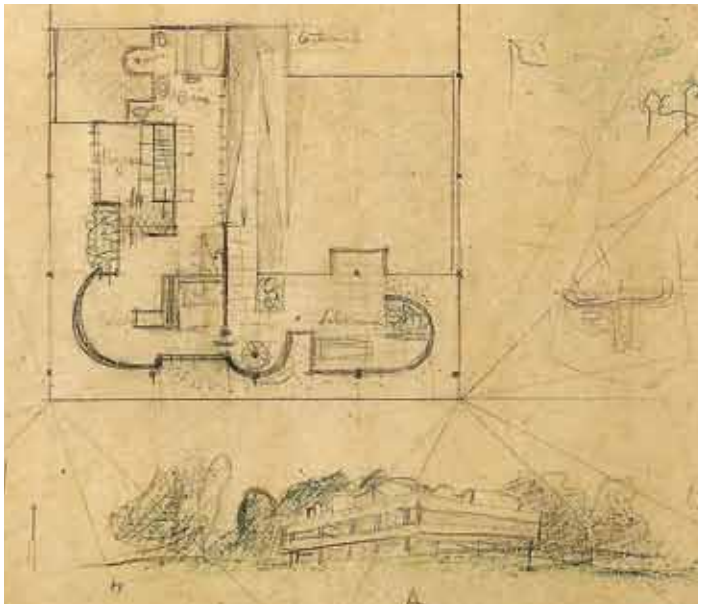
While the implementation of Le Corbusier's 'Five Points' would complicate the building process and, later, create a number of practical issues for the Savoye family, the result remains a stunning fusion between modern architecture and the surrounding nature in which it is placed. Villa Savoye became one of the most influential buildings of the 1930s, spawning imitations all over the world, and it continues to be a true architectural icon 80 years later.



The design & construction of Villa Savoye

Villa Savoye was commissioned as a private country residence by Pierre and Emilie Savoye in 1928. They came from a wealthy Parisian family that ran a large and successful insurance company and owned land in the town of Poissy, 30 km (18.6 miles) to the west of Paris. The land upon which they intended to build was a sloping meadow, surrounded by forest and with a magnificent view of the River Seine. Apart from the number of rooms required and the wish for all the latest technical fittings befitting a modern home, Le Corbusier noted that his clients were: 'quite without preconceptions, either old or new' and only had a vague idea of what their future country house should look like.

Le Corbusier and Pierre Jeanneret quickly went to work and by mid-October 1928 were able to present a detailed sketch of their idea. The first scheme underwent several modifications, resulting in



four subsequent sets of drawings. Two of these—the second and third—differed from the first, while the final two drawings returned to the initial ideas of the first sketches, but decreased the overall size to reduce costs.

The primary design principles were relatively clear: the building would occupy a strategic position in the center of the site and the views would be further maximized by means of pillars that would raise the house by one level. Unlike his earlier town villas Le Corbusier was able to carefully design all four sides of the Villa Savoye in response to the view and the orientation of the sun. On the first floor he placed the main entrance hall, the ramp and the stairs, the garage, and rooms for the chauffeur and maids. On the second floor were the master bedroom, a bedroom for the Savoyes' child, a guest bedroom, kitchen, living-room and external terraces. The living-room was orientated towards the northwest, while the terrace faced south. The son's bedroom faced southeast, and the kitchen and service terrace were on the northeastern side. On the third floor level there were a series of sculpted spaces that formed a solarium.

The interiors

The ramp

The visitor enters the house through the glass and white-walled entrance hall. Four columns appear to direct the visitor towards the double-flight ramp that can be seen from almost anywhere in the house.

The stair

A circular stair with a solid baluster winds its way up through the core of the building. It also provides access to the villa's two cellars.

The kitchen

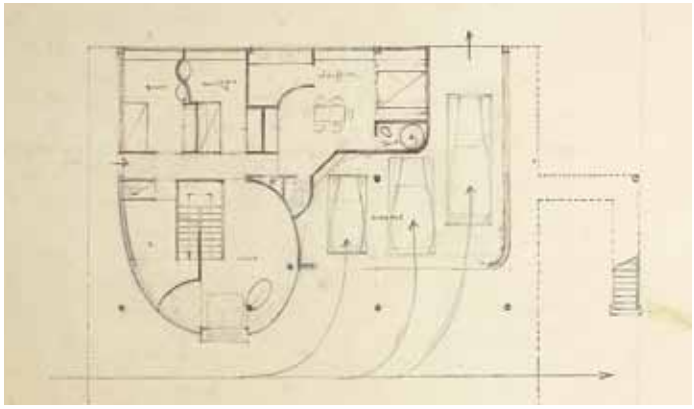
The kitchen is not precisely the sanctuary of the house, but it is certainly one of the most important places. The kitchen and living room—these are the rooms which are lived in.

The living room

Conceived as an unbroken space, this 86m² (925.7 sq. ft.) area is the main room in the house. Huge glazed panels open out onto the garden terrace.

The garage

The garage, which can accommodate up to three cars, is laid out on a 45° angle - matching the turning circle of a car.



The bathroom

The bathroom in the master apartment contains one of the Villa's special features: a rectangular bath clad in 5 cm x 5 cm (1.96 inches) turquoise blue ceramic tiles. A concrete reclining 'chaise-long' at the edge of the bath is based on earlier furniture designs that Le Corbusier had worked upon.

© Fondation Le Corbusier

The hanging garden

The real garden of the dwelling is not on ground level, but raised 3.5 m (11.5 ft.) above. This will be the hanging garden (…) it is from this area that we will survey the entire landscape.

The solarium

The ramp culminates at the solarium sited atop the house. It offers excellent views of both the architecture of the house below and of the nature that surrounds it. From the solarium, the guest descends the spiral staircase back down to the entrance hall.

Colour

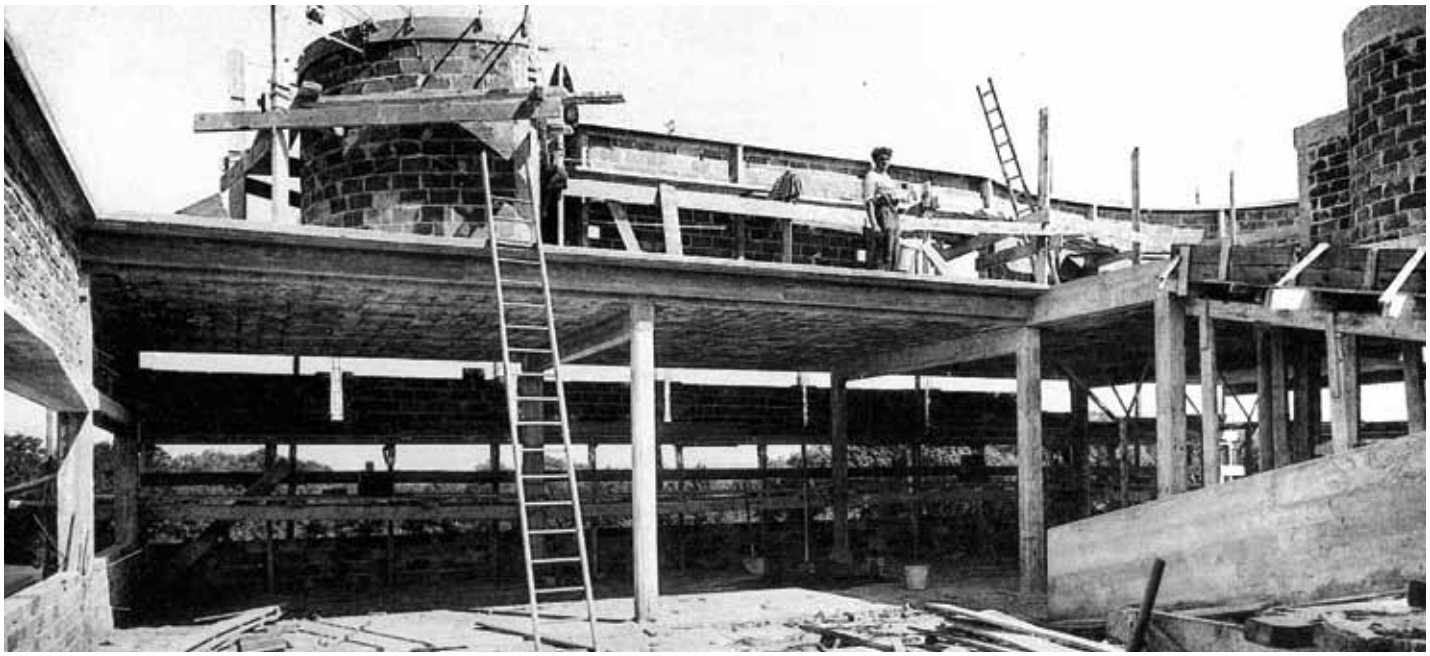
Although an architectural purist, Le Corbusier was nevertheless a strong supporter of polychromy—the art of combining colors. 'Man needs color. Color is the immediate, spontaneous expression of life.' The exterior of Villa Savoye is predominantly white, but two side-walls of the garage and the servant quarters are painted dark green to create empathy with the surrounding lawn.

Although of seemingly simple design, Villa Savoye proved to be extremely complex from a construction perspective. While Le Corbusier was experimenting with new concepts both on a functional and formal level, those contracted to build the house were still entrenched in traditional skills and techniques. This led to a series of disagreements, delays and cost overruns that would hamper the entire project.

Additional costs were also caused by the fact that although Le Corbusier always advocated the use of standard industry components, almost every element for Villa Savoye had to be customized and created in situ. From an estimated price of 787,000 francs in 1929, the total building costs had risen to approximately 900,000 francs by 1931.

[The house is a box in the air, pierced all around, without interruptions, by a long window.]

Le Corbusier



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From 1931 to today

The Savoye family took possession of the house in 1931 but abandoned it during World War II, leaving it to be commandeered by both the German and American armies. At the end of the war, with the Savoyes no longer in a position to maintain it, the town of Poissy took control of the villa. In 1958, they eventually expressed a wish to expropriate the villa completely with a view to demolishing it. Only a vigorous international campaign by the architect fraternity and the intervention of Le Corbusier halted this plan.

In 1965, the villa was added to the French register of historical monuments, the first example of modernist architecture to be included. Various restoration projects were carried out to safeguard the building, the largest one, a state-funded process, taking place between 1985 and 1997, which reinstated many of the original fittings.

It is impossible to ignore the influence Villa Savoye has had on modern international architecture, and the house, which is open to the public, continues to be a magnet for those wishing to experience at first hand the work of Le Corbusier.

© Fondation Le Corbusier

Le Corbusier

Though a pioneer of modern architecture, Le Corbusier was more than just an architect. He was also a famous writer, painter and urbanist, and the designer of some of the most iconic furniture of the 20th century. In a career that spanned five decades he created a body of work that is still revered and respected today.
He was born Charles-Édouard Jeanneret on October 6, 1887 in La Chaux-de-Fonds, a small city in northwestern Switzerland only five kilometers (3.1 miles) from the French border. His father, Georges Edouard Jeanneret, was a watch engraver and enameller, while his mother, Marie Charlotte Amélie Jeanneret-Perret, was a music teacher. From an early age Le Corbusier was attracted to the visual arts and studied at the local Art School.

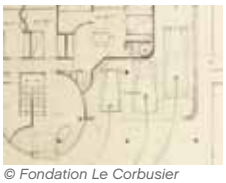
In 1907, he traveled to Paris, France, and worked in the office of Auguste Perret, the French pioneer of reinforced concrete. By 1908, he was studying architecture in Vienna, Austria, with Josef Hoffman, before moving to Berlin, Germany, in 1910 to work for the architect Peter Behrens. It is believed that during his stay in Berlin Le Corbusier met both Mies van der Rohe and Walter Gropius.
At the outbreak of World War I, Le Corbusier returned to Switzerland to teach at his old school. It was during this period that he also worked on the theoretical architectural studies that would become the foundation for his future work. On returning to Paris he opened his own architectural practice with his cousin Pierre Jeanneret, and by 1920 had adopted his pseudonym of Le Corbusier. Over the next decade, Le Corbusier further refined his theories on Purism, including his famous 'Five Points' of architecture, and would put them into practice building a series of modernist villas in and around Paris. This period culminated in the design and construction of Villa Savoye.

Throughout the 1930s and after World War II, Le Corbusier expanded his ideas on urban planning, and attempted to realize his work on projects in Marseilles, France and in a new capital city that was being built for the states of Punjab and Haryana in India. When Le Corbusier died on August 27, 1965, he left behind a substantial body of work that spanned five decades, including journals, books, iconic furniture designs and ground-breaking architecture such as Villa Savoye.

Le Corbusier

Facts and statements

The semi-circular driveway is constructed to exactly match the turning circle of a 1927 Citroën automobile.



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Villa Savoye appears to be lifted into the air by 15 cylindrical pillars. Each has a radius of 30 cm (11.8 inches) and reaches 2.87 m (9.5 ft.) in height.

© Fondation Le Corbusier

The Villa Savoye uses horizontal ribbon windows. Unlike many of his modernist contemporaries, Le Corbusier often chose to use timber windows rather than metal ones.

© Fondation Le Corbusier

Le Corbusier termed the hanging garden an 'open air living room' which could be used for summer receptions.

© Fondation Le Corbusier

Le Corbusier's ground plan for the villa was designed using the ratios of the golden section - a geometrical system of harmony and proportion first described by the ancient Greeks.
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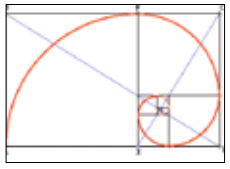

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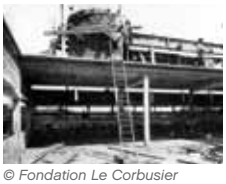
When the German army commandeered the house during World War II, they used it as a hay store.



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Facts about Villa Savoye

Location:..... 82, Rue de Villiers, 78300 Poissy, France
Architects:..... Le Corbusier & Pierre Jeanneret
Style: ..... Modernist, International
Date: 1928-1931
Construction type:.... Country residence
Materials:..... Post/beam structure in reinforced concrete
Original cost: ..... Approximately 900,000 Francs
Surface area:..... 408 m² (1,138 sq. ft.)

Fondation Le Corbusier

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A Word from the Artist

'Le Corbusier has always been an inspiration to me. His architecture is harmonious, well-balanced and coherent. His philosophy and his opus are timeless and yet still far ahead of his time at the same time.

One of the great examples of this work - and one of my favorites - is Villa Savoye: closed and seemingly impregnable from the exterior, open and organic from the interior. With this building he reached two contradicting characteristics at the same time: isolation from and relation to nature.

The biggest challenges of the LEGO® model construction - which took more than 15 versions to reach its final state and included the help of most experienced designers from the LEGO team - were the pillars and the complex roof design.

At first I constructed the pillars from 1x1 round bricks, but they always seemed oversized. In the final version, after consulting with the LEGO design team, I used the blades from LEGO light sabers, which in turn presented another challenge when it came to anchoring them to the base plate. When attempting to construct the roof elements, I was amazed yet again by Le Corbusier's art: nothing is coincidental and every change in his design principals led to imbalance and disharmony in the model.'

The 'Scale Model' line – LEGO® Architecture in the 1960s

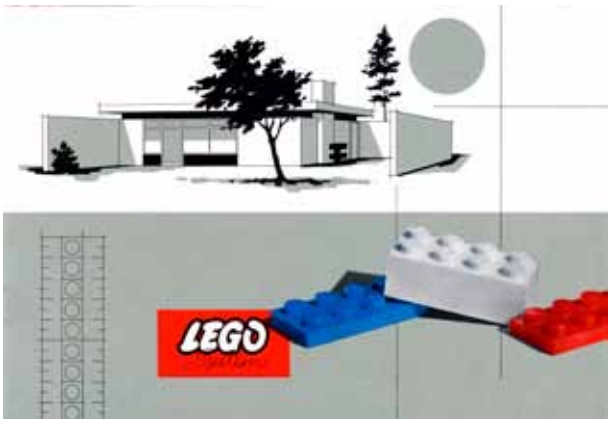
The history of the current LEGO Architecture series can be traced back to the beginning of the 1960s when the LEGO brick's popularity was still steadily increasing. Godtfred Kirk Christiansen, the then owner of the company, began looking for ways to further expand the LEGO system, and asked his designers to come up with a set of new components that would add a new dimension to LEGO building.

Their answer was as simple as it was revolutionary: five elements that matched the existing bricks, but were only one third the height. These new building 'plates' made it possible to construct more detailed models than before.

This greater LEGO flexibility seemed to match the spirit of the age; modernist architects were redefining how houses looked, and people were taking an active interest in the design of their dream homes. It was from these trends that the LEGO 'Scale Model' line was born in early 1962.

The name itself was a direct link to the way architects and engineers worked and it was hoped that they and others would build their projects 'to scale' in LEGO elements. As with LEGO Architecture today, the original sets were designed to be different from the normal brightly colored LEGO boxes, and also included 'An Architectural Book' for inspiration.

Though the five elements remain an integral part of the LEGO building system today, the 'Scale Model' line was phased out in 1965—it would be over 40 years before its principles would be revived in the LEGO Architecture series we know today.



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