Introduction to Theory and History of Architecture

SBEA 1513

Modern Master Builders

Louis Sullivan & Frank lloyd Wright

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Architect Louis Sullivan

https://en.wikipedia.org/wiki/File:Louis_Sullivan_circa_1895.jpg

- Louis Henry Sullivan (September 3, 1856 – April 14, 1924)
- An American architect
- Called the "FATHER OF SKYSCRAPERS"
- An influential architect and critic of the Chicago School
- A mentor to Frank Lloyd Wright, and an inspiration to the Chicago group of architects who have come to be known as the Prairie School.
- Sullivan is one of "the recognized trinity of American architecture"
- He posthumously received the AIA Gold Medal in 1944.

- born to Irish and Swedish immigrants in 1856
- grew up at grandparent's farm learning things about nature
- spent a lot of time around Boston
- exploring and looking at buildings
- studied architecture at Massachusetts Institute of Technology
- entered at the age of 16
- he left MIT in a year to live in Pennsylvania
- then he went to Chicago, where he worked with the *father of the skyscraper*, William Le Baron
- went to Paris in 1874
- studied at Ecole des Beaux-Arts
- returned to Chicago in 1875 got a job as a draftsman in the office of Joseph S. Johnson & John Edelman
- left Johnson in 1879
- worked in the office of Dankmar Adler
- the firm of Adler & Sullivan designed over 180 buildings during its existence

Sullivan and the steel high-rise

- The taller the building, the more strain this placed on the lower sections of the building; since there were clear engineering limits to the weight such "load-bearing" walls could sustain, large designs meant massively thick walls on the ground floors, and definite limits on the building's height.
- The development of cheap, versatile steel in the second half of the 19th century changed those rules.
- A much more urbanized society was forming and the society called out for new, larger buildings.
- The mass production of steel was the main driving force behind the ability to build skyscrapers during the mid-1880s.
- Louis Sullivan coined the phrase "form (ever) follows function", which, shortened to "form follows function," would become the great battle-cry of modernist architects.

Philosophy

- Louis Sullivan coined the phrase "form (ever) follows function",
- This credo, which placed the demands of practical use above aesthetics, would later be taken by influential designers to imply that decorative elements, which architects call "ornament," were superfluous in modern buildings.
- But Sullivan himself neither thought nor designed along such dogmatic lines during the peak of his career.
- Indeed, while his buildings could be spare and crisp in their principal masses, he often punctuated their plain surfaces with eruptions of lush Art Nouveau and something like Celtic Revival decorations, usually cast in iron or terra cotta, and ranging from organic forms like vines and ivy, to more geometric designs, and interlace, inspired by his Irish design heritage.
- Terra cotta is lighter and easier to work with than stone masonry. Sullivan used it in his architecture because it had a malleability that was appropriate for his ornament.

- Probably the most famous example is the writhing green ironwork that covers the entrance canopies of the Carson Pirie Scott store on South State Street. These ornaments, often executed by the talented younger draftsman in Sullivan's employ, would eventually become Sullivan's trademark; to students of architecture, they are his instantly-recognizable signature.
- Another signature element of Sullivan's work is the massive, semi-circular arch. Sullivan employed such arches throughout his career—in shaping entrances, in framing windows, or as interior design.
- All of these elements can be found in Sullivan's widely-admired Guaranty Building, which he designed while partnered with Adler.
- this office building in Buffalo, New York is in the Palazzo style, visibly divided into three "zones" of design: a plain, wide-windowed base for the ground-level shops; the main office block, with vertical ribbons of masonry rising unimpeded across nine upper floors to emphasize the building's height; and an ornamented cornice perforated by round windows at the roof level, where the building's mechanical units (like the elevator motors) were housed.

Auditorium Building

The Auditorium Building

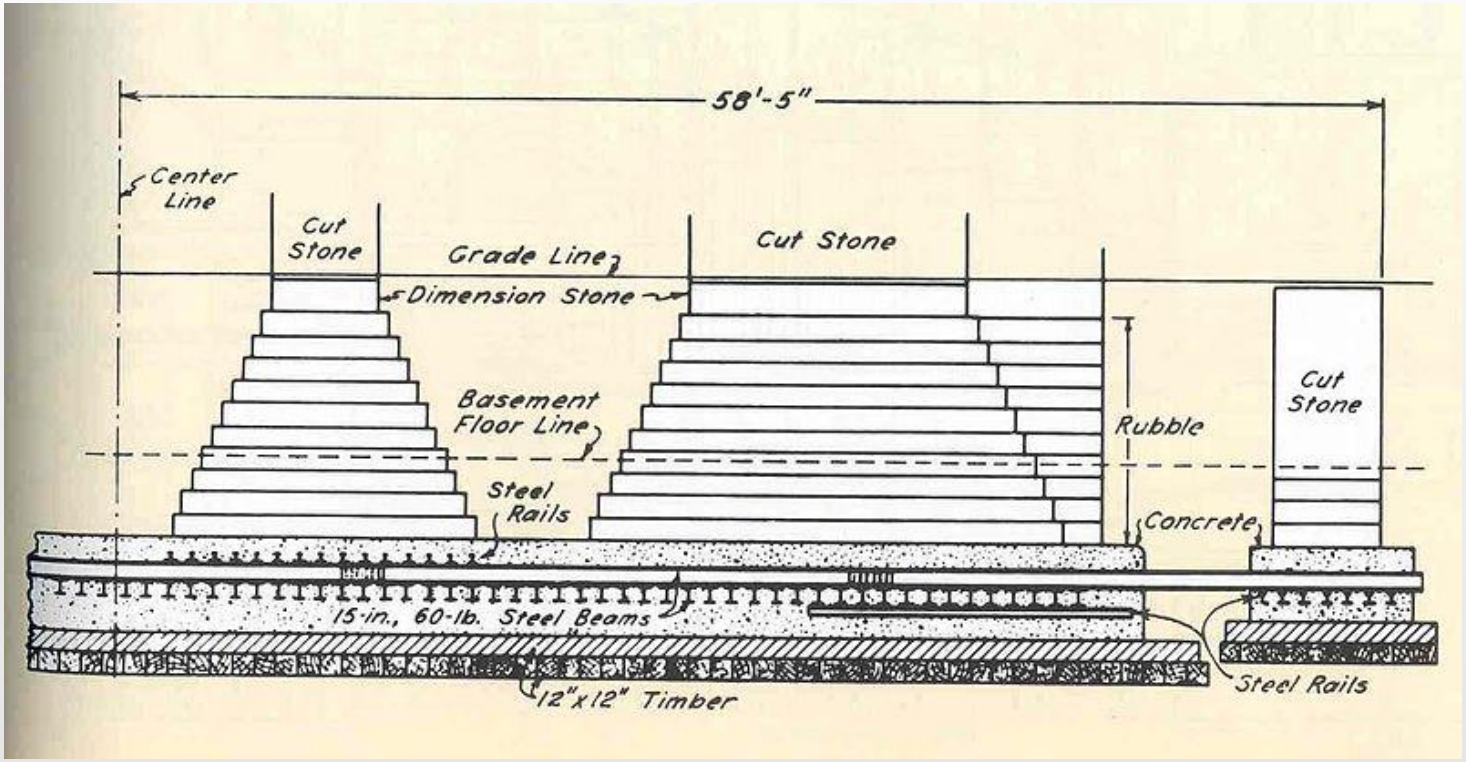
- **Location:** 430 S. Michigan Avenue
  Chicago Illinois 60605
  United States
- **Built:** 1889
- **Architect:** Dankmar Adler; Louis Sullivan
- **Architectural style:** Late 19th and Early 20th Century American Movements
- **Governing body:** Private

https://commons.wikimedia.org/wiki/File:Auditorium_Building_Chicago.jpg

- The **Auditorium Building** in Chicago is one of the best-known designs of Dankmar Adler and Louis Sullivan.
- It was added to the National Register of Historic Places on April 17, 1970. It was declared a National Historic Landmark in 1975, and was designated a Chicago Landmark on September 15, 1976.
- In addition, it is a historic district contributing property for the Chicago Landmark Historic Michigan Boulevard District.
- Since 1947, the Auditorium Building has been the home of Roosevelt University.
- The **Auditorium Theatre** is part of the Auditorium Building and is located at 50 East Congress Parkway. The theater was the first home of the Chicago Civic Opera and the Chicago Symphony Orchestra.

Origin and purpose

- Ferdinand Peck, a Chicago businessman, incorporated the Chicago Auditorium Association in December 1886 to develop what he wanted to be the world's largest, grandest, most expensive theater that would rival such institutions as the Metropolitan Opera House in New York City. He was said to have wanted to make high culture accessible to the working classes of Chicago.
- The building was to include an office block and a first class hotel.
- "The Auditorium was built for a syndicate of businessmen to house a large civic opera house; to provide an economic base it was decided to wrap the auditorium with a hotel and office block.
- The entrance to the auditorium is on the south side beneath the tall blocky eighteen-story tower.
- The rest of the building is a uniform ten stories, organized in the same way as Richardson's Marshall Field Wholesale Store. The interior embellishment, however, is wholly Sullivan's, and some of the details, because of their continuous curvilinear foliate motifs, are among the nearest equivalents to European Art Nouveau architecture."



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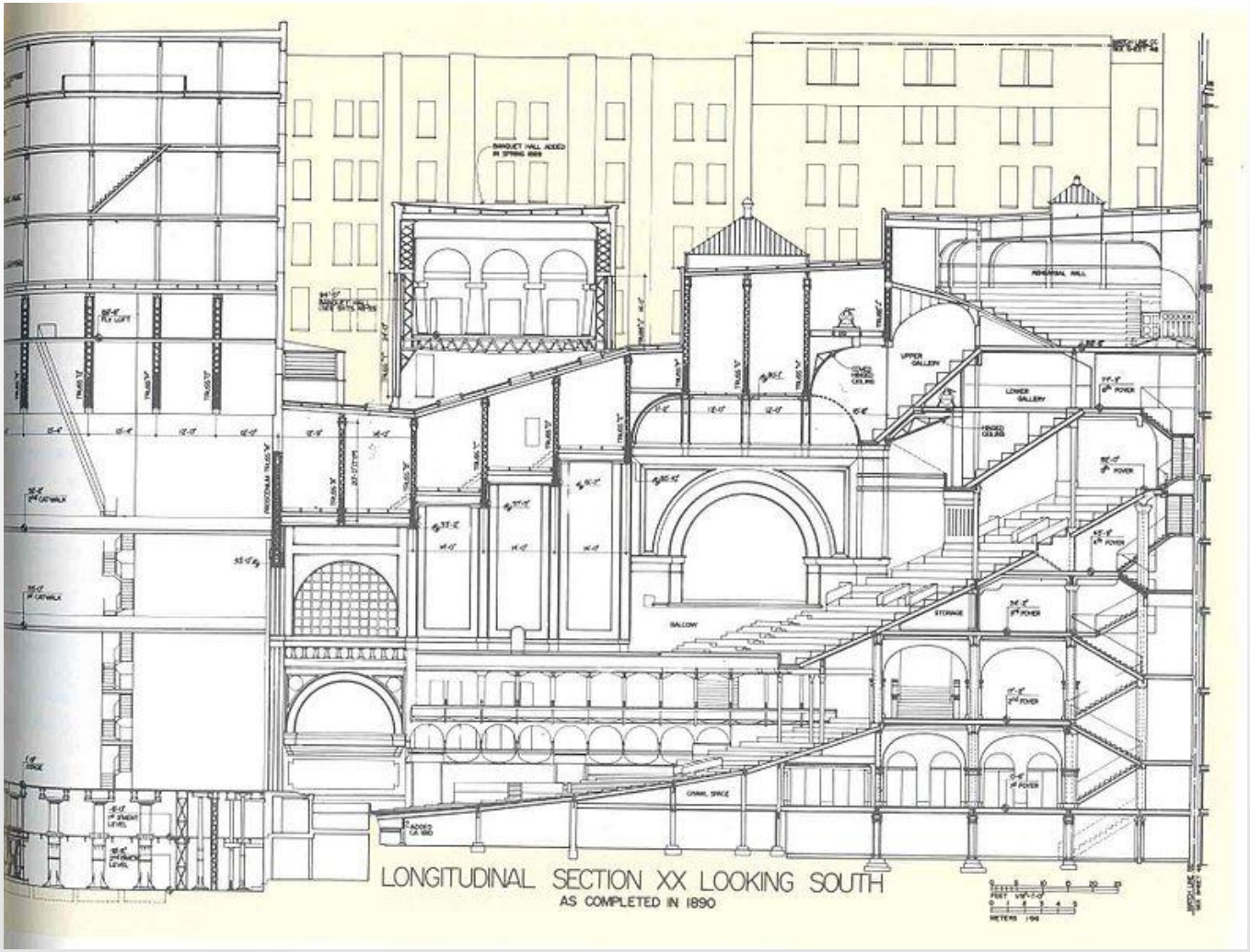

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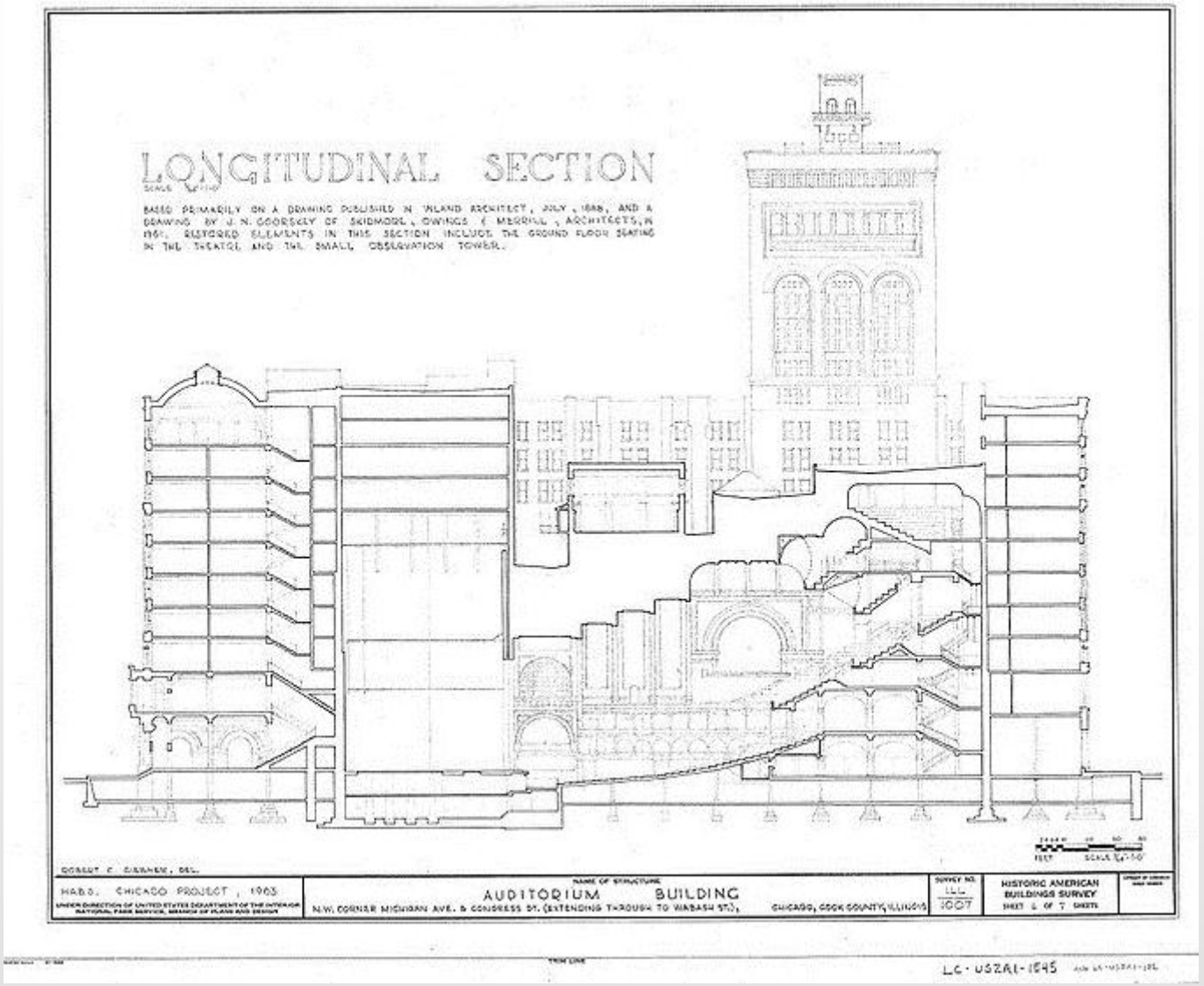

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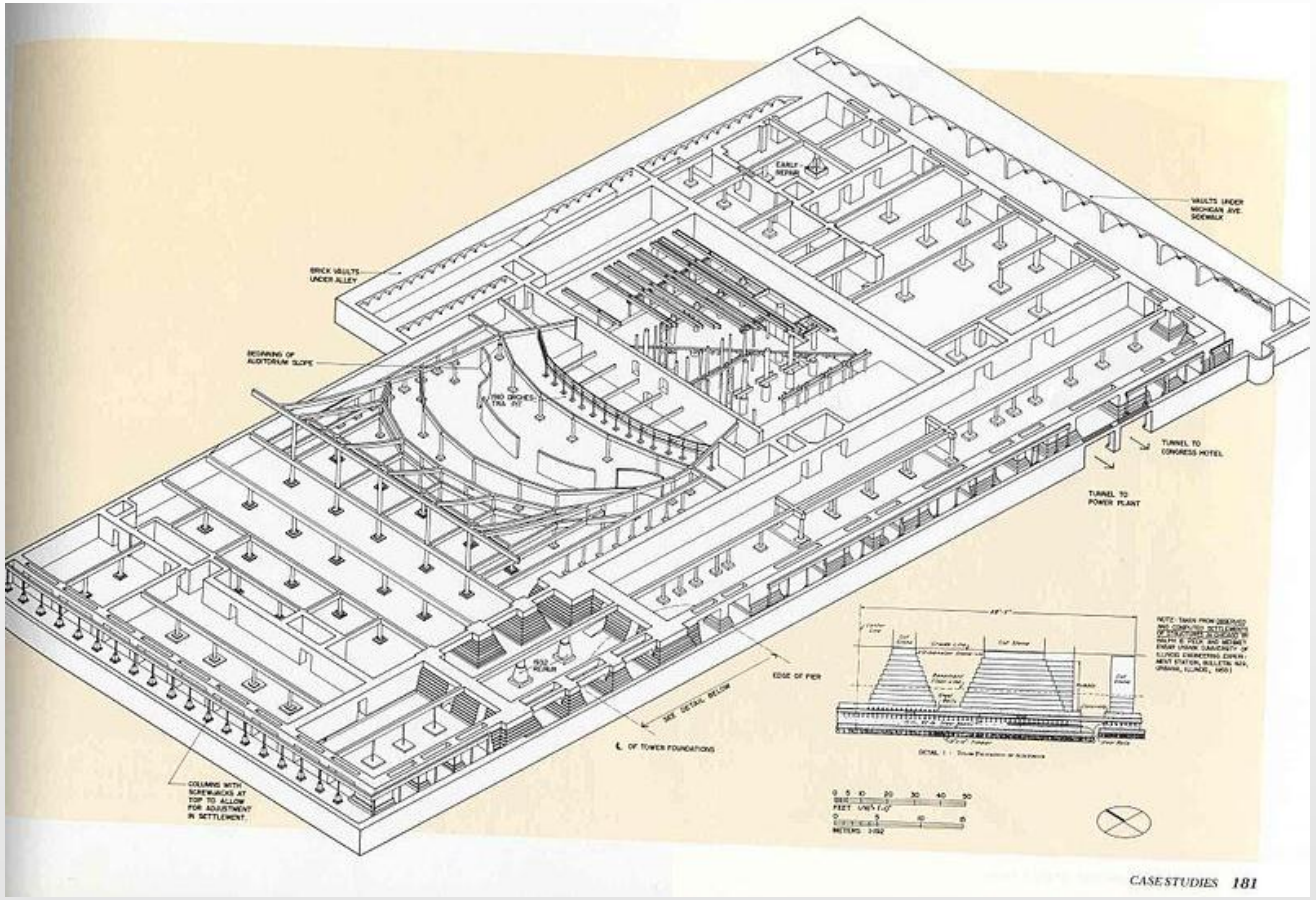

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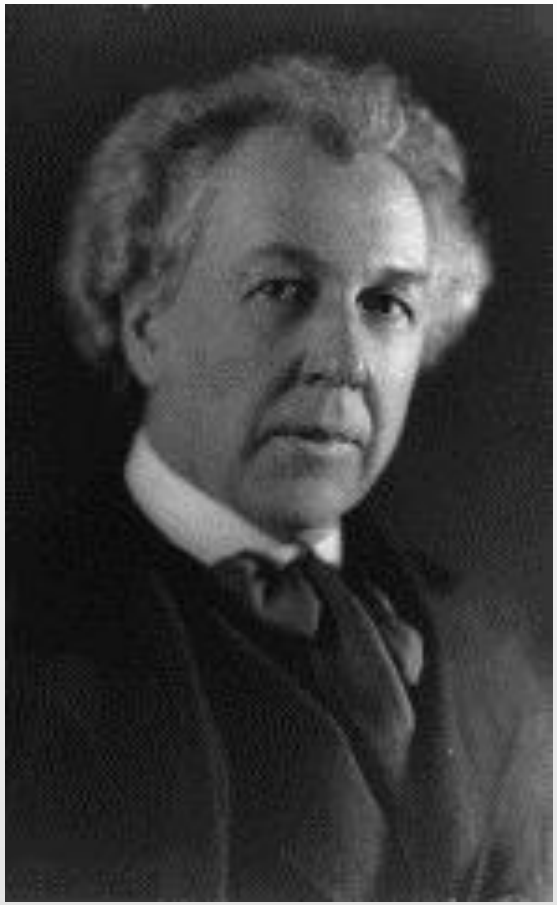
Frank Llyod Wright



Frank Lloyd Wright

- Born in the agricultural town of Richland Center, Wisconsin, United States, just two years after the end of the American Civil War.
- Wright would rarely credit any influences on his designs, but most architects, historians and scholars agree he had five major influences:
  1. Louis Sullivan, whom he considered to be his 'Lieber Meister' (dear master),
  2. Nature, particularly shapes/forms and colors/patterns of plant life,
  3. Music (his favorite composer was Ludwig van Beethoven),
  4. traditional Japanese design (as in art, prints, buildings),

Dominant Style That Influence The Archi Ideology Of Frank Llyod Wright

- Prairie style

  -extended low buildings with shallow, sloping roofs, clean sky lines, horizontal lines, suppressed chimneys, overhangs and terraces, using unfinished materials, design that complement surrounding land context and "open plan system."
- Cubism

  -focused on forms like the cubes, cylinder, sphere and the cone to represent the natural world.

  - present ornaments, exterior and interior design in a single and two dimensional picture plane referring to the lines of Piet Mondrian art
- Organic structuralism

  -presents the use of cantilevered reinforced concrete structure for flooring and beams system similar to geometric nature of tree structure.
- Organic primitive

  -uses natural materials for building structures that came naturally out of the existing context.

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The Robie House

The Robie House is one of the best known examples of Prairie Style architecture and referring to organic concept.

The house and its various components (e.g. doors, windows, furniture, tapestries, etc.) owed its design influence to the landscape and plant life of the Midwest prairie of the United States.

The building has a low-proportioned, horizontal profile which gives it the appearance of spreading out on the flat prairie land.

Steel-framed cantilevered roof overhangs, continuous bands of art-glass windows and doors, and the use of natural materials are typical Prairie Style features which emphasizes this "horizontal line" of the building.

A chimney mass containing the house's four fireplaces rises through the center of the house acting as the anchor to which the house is designed around on all three levels. The exterior walls are constructed of a Chicago common brick core with a red-orange iron-spotted Roman brick veneer.

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The Robie House

The planter urns, copings, lintels, sills and other exterior trim work are of Bedford limestone. The fireplaces and chimneys are constructed of the same brick and limestone as the exterior and have a sense of an artistic sculptural shape of their own as opposed to being a part of a wall.

The design of the art glass windows and doors is a sharp-angled multicolored pattern whose geometry Wright also used for designs of tapestries inside the house and for gates in some of the porches and garden walls outside.

The structural steel framing that support the cantilevered roof overhangs also creates interior spaces that are absent of posts, walls, and other typical obstructions which results in the open flowing interiors that symbolizes the openness of the American prairie.

Wright's Architectural Approaches & Philosophies?

Detailing and ornamentation elements-

a) Integrate detailings & ornamentation with main / secondary building structural system by;

i) using proportionate detailings and ornamentation aligned with the building structure which is based on integrated abstract motifs in form of 45 and 30 degrees, circle or elipse scheme.

ii)integration of interior and exterior structure. For eg-beam to column, flooring to wall, wall to ceiling structure.

iii)Eg of building - A.D German Warehouse in Richland Centre, Wisconsin ; Price Tower in Bertlessville, Oklahama & Marin, County Civic Centre

b) Detailings refering to regional context by-

i) portraying the local societies tradition & heritage and existing natural landscape.

ii)However, did not portray direct imitation of elements but redesign in abstract motif and forms using geometrical shapes

ii)Eg of building -Darwin D. Martin in Buffalo, Barnsdall in Hollywood

c) Proportionate design of detailings and ornamentation

i. detailings should be integrated with entire design form from the aspect of color, material, motif and pattern composition.

ii. Presented in moderate scale, harmonize with interior and exterior environment according to existing context.

iii. Eg of building **-**Unity Church, Oak Park**.**

Application and usage of building materials

a) Application of local materials by;

i) using natural materials found in the existing context to suit the climatic condition and temperature in order to produce building that harmonize with its nature that manifest there.

ii)Eg of building – Imperial Hotel in Tokyo; Taliesen West in Arizona

b) Integration of materials with structural elements by;

i) Bring out the nature of the material let their nature intimately into your scheme. Strip the wood of varnish let it alone stain it. Develop the natural texture, color of the plastering and stain it. Reveal the nature of the wood plaster, brick or stone.

ii)Eg of building – Fallingwater in Bear Run, Pennyslvania ,

c) Adaptation of easy molded and shaped materials such as stone and masonry, timber, glass, concrete with building design as these materials are;

i) domesticated in value and has strong relation with human and its environment.

ii) has strong aesthetical and functional values as it comes in various color, texture and form.

Portray unique design style and identity

a) Referring to local character by;

i) following the existing concept and context

ii)Eg of building – Richard David Residence in Marion

b) organic with existing context by;
i) emphasis on the usage of building structure from latest material and available technology

ii) not emphasis on prototype design that can be consistently reproduced but must portray own identity, message, function and purpose well intergrated with human values.

iii)Eg of building –Taliesen III, Spring Green, Wisconsin;

References

- Connely, W. (1960). *Louis Sullivan as He Lived: The Shaping of American Architecture*. Horizon Press.
- Jacks, P. J. (1994). Frank Lloyd Wright: Architect.
- Levine, N. (1996). *The Architecture of Frank Lloyd Wright* (p. 105). Princeton, NJ: Princeton University Press.
- Storrer, W. A., & Wright, F. L. (2002). *The architecture of Frank Lloyd Wright: a complete catalog*. University of Chicago Press.
- Sullivan, L. H. (1896). The tall office building artistically considered. *Lippincott's Magazine*, *57*(3), 406.
- Sullivan, L. H. (2012). *The Autobiography of an Idea*. Courier Corporation.
- Szarkowski, J. (2000). *The Idea of Louis Sullivan*. Thames & Hudson.
- Twombly, R. C. (1986). *Louis Sullivan: his life and work*. Viking Pr.
- Wright, F. L. (1935). Broadacre City: A new community plan. *Architectural Record*, *77*(4), 243-54.
- Wright, F. L., & Pfeiffer, B. B. (1991). *Frank Lloyd Wright*. Y. Futagawa (Ed.). ADA Edita Tokyo.