Residential Foundation

- **Recognizing Shifts in the Home Foundation**
  Recognizing Shifts in the Home Foundation Subtle Clues That Indicate Structural Changes Early Indicators of Potential Foundation Damage Observing Signs of Settlement in Floors Identifying Hairline Cracks and Surface Gaps Evaluating Tilted Door Frames and Window Alignment Understanding Bowed Wall Patterns in Basements Detecting Weak Spots Beneath Interior Flooring Uncovering Gradual Shifts in Support Beams Pinpointing Areas Prone to Moisture Intrusion Checking for Stair-Step Cracks Along Walls Preventing Growth of Small Foundation Cracks
- **Exploring Slab on Grade Construction Details**
  Exploring Slab on Grade Construction Details Comparing Pier and Beam Home Foundations Recognizing Basement Foundations in Older Houses Understanding the Basics of Piering Strategies Exploring Techniques for Slab Jacking Projects Grasping the Scope of Epoxy Injection Repairs Assessing Helical Piers for Added Support Considering Carbon Fiber Solutions for Wall Reinforcement Discovering Polyurethane Foam Applications Investigating Steel Piers in Home Restoration Reviewing Concrete Piers for Structural Stability Selecting Appropriate Methods for Specific Soil Types
- **About Us**

In the world of home maintenance, few things are as unsettling as discovering cracks in your walls. Among the various types of cracks, stair-step cracks along walls are particularly concerning because they often indicate serious structural issues. These cracks, which resemble the steps of a staircase, typically appear where walls meet the foundation or at corners. While they may seem like a mere cosmetic issue at first glance, they can be a sign of foundation problems that require immediate attention.

The first step in checking for stair-step cracks is to conduct a thorough visual inspection of the interior and exterior walls of your home. Start by examining the areas where the walls meet the foundation, as these are the most common locations for such cracks to develop. Look closely at corners and any other points where structural elements intersect. It's important to perform this inspection under good lighting conditions, as subtle cracks can be easily overlooked in dim light.

When you spot a potential stair-step crack, take a moment to observe its characteristics. Stair-step cracks tend to follow the mortar joints between bricks or blocks, creating a jagged pattern that resembles a staircase. The width of the crack can also be telling; wider cracks are generally more serious than narrow ones. It's helpful to take photographs of any cracks you find, as these can be useful for documenting the issue and tracking any changes over time.

If you discover stair-step cracks during your inspection, it's crucial not to panic. While these cracks can be indicative of foundation problems, they don't always mean that your home is in immediate danger. However, it's important to take action to determine the cause and severity of the issue. Consulting with a structural engineer or a foundation specialist is highly recommended. These professionals have the expertise to assess the cracks and determine whether they are due to normal settling of the house or more serious issues like soil movement or foundation damage.

In some cases, stair-step cracks may be caused by factors that are relatively easy to address, such as poor drainage around the foundation or minor shifts in the soil. In other situations, the cracks may be a sign of more significant problems that require extensive repairs, such as underpinning the foundation or even rebuilding parts of the structure. The sooner you identify and address the issue, the better your chances of preventing further damage and keeping repair costs manageable.

To prevent stair-step cracks from developing or worsening, it's essential to maintain your home's foundation properly. This includes ensuring that the soil around the foundation is properly graded to direct water away from the house, maintaining a functional drainage

system, and addressing any issues with water infiltration promptly. Regular inspections can also help you catch potential problems early, before they lead to more serious damage.

In conclusion, checking for stair-step cracks along walls is an important part of home maintenance that should not be overlooked. By conducting regular inspections, documenting any cracks you find, and seeking professional advice when necessary, you can help protect your home from the potentially devastating effects of foundation problems. Remember, when it comes to stair-step cracks, early detection and prompt action are key to maintaining the structural integrity and safety of your home.

Facebook about us:

Residential Foundation Repair Services

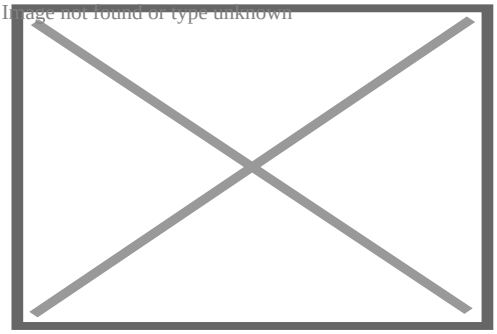
Strong Foundations, Strong Homes

About building code

Globe icon. Image not found or type unknown The examples and perspective in this article **may not represent a worldwide view of the subject**. You may improve this article, discuss the issue on the talk page, or create a new article, as appropriate. *(November 2021) (Learn how and when to remove this message)*

Not to be confused with Zoning laws.

Image not found or type unknown



Code Violation: This fire-rated concrete block wall is penetrated by cable trays and electrical cables. The hole should be firestopped to restore the fire-resistance rating of the wall. Instead, it is filled with flammable polyurethane foam.

A **building code** (also **building control** or **building regulations**) is a set of rules that specify the standards for construction objects such as buildings and non-building structures. Buildings must conform to the code to obtain planning permission, usually from a local council. The main purpose of building codes is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures — for example, the building codes in many countries require engineers to consider the effects of soil liquefaction in the design of new buildings.[1] The building code becomes law of a particular jurisdiction when formally enacted by the appropriate governmental or private authority.[2]

Building codes are generally intended to be applied by architects, engineers, interior designers, constructors and regulators but are also used for various purposes by safety inspectors, environmental scientists, real estate developers, subcontractors, manufacturers of building products and materials, insurance companies, facility managers, tenants, and others. Codes regulate the design and construction of structures where adopted into law.

Examples of building codes began in ancient times.[3] In the USA the main codes are the International Building Code or International Residential Code [IBC/IRC], electrical codes and plumbing, mechanical codes. Fifty states and the District of Columbia have adopted the I-Codes at the state or jurisdictional level.[4] In Canada, national model codes are published by the National Research Council of Canada.[5] In the United Kingdom, compliance with Building Regulations is monitored by building control bodies, either Approved Inspectors or Local Authority Building Control departments. Building Control regularisation charges apply in case work is undertaken which should have had been inspected at the time of the work if this was not done.[6]

Types

[edit]

The practice of developing, approving, and enforcing building codes varies considerably among nations. In some countries building codes are developed by the government agencies or quasi-governmental standards organizations and then enforced across the country by the central government. Such codes are known as the **national building codes** (in a sense they enjoy a mandatory nationwide application).

In other countries, where the power of regulating construction and fire safety is vested in local authorities, a system of model building codes is used. Model building codes have no legal status unless adopted or adapted by an authority having jurisdiction. The developers of model codes urge public authorities to reference model codes in their laws, ordinances, regulations, and administrative orders. When referenced in any of these legal instruments, a particular model code becomes law. This practice is known as 'adoption by reference'. When an adopting authority decides to delete, add, or revise any portions of the model code adopted, it is usually required by the model code developer to follow a formal adoption procedure in which those modifications can be documented for legal purposes.

There are instances when some local jurisdictions choose to develop their own building codes. At some point in time all major cities in the United States had their own building codes. However, due to ever increasing complexity and cost of developing building regulations, virtually all municipalities in the country have chosen to adopt model codes instead. For example, in 2008 New York City abandoned its proprietary *1968 New York City Building Code* in favor of a customized version of the International Building Code.[7] The City of Chicago remains the only municipality in America that continues to use a building code the city developed on its own as part of the *Municipal Code of Chicago*.

In Europe, the Eurocode: Basis of structural design, is a pan-European building code that has superseded the older national building codes. Each country now has National Annexes to localize the contents of the Eurocodes.

Similarly, in India, each municipality and urban development authority has its own building code, which is mandatory for all construction within their jurisdiction. All these local building codes are variants of a National Building Code,[8] which serves as model code proving guidelines for regulating building construction activity.

Scope

[edit]

This section **needs additional citations for verification**. Please help improve this article by adding citations to reliable sources in this section. Unsourced material may be challenged and removed. *(October 2016) (Learn how and when to remove this message)*

The purpose of building codes is to provide minimum standards for safety, health, and general welfare including structural integrity, mechanical integrity (including sanitation, water supply, light, and ventilation), means of egress, fire prevention and control, and energy conservation.[9][10] Building codes generally include:

- Standards for structure, placement, size, usage, wall assemblies, fenestration size/locations, egress rules, size/location of rooms, foundations, floor assemblies, roof structures/assemblies, energy efficiency, stairs and halls, mechanical, electrical, plumbing, site drainage & storage, appliance, lighting, fixtures standards, occupancy rules, and swimming pool regulations
- Rules regarding parking and traffic impact
- Fire code rules to minimize the risk of a fire and to ensure safe evacuation in the event of such an emergency[*citation needed*]
- Requirements for earthquake (seismic code), hurricane, flood, and tsunami resistance, especially in disaster prone areas or for very large buildings where a failure would be catastrophic[*citation needed*]
- Requirements for specific building uses (for example, storage of flammable substances, or housing a large number of people)
- Energy provisions and consumption
- Grandfather clauses: Unless the building is being renovated, the building code usually does not apply to existing buildings.
- Specifications on components
- Allowable installation methodologies
- Minimum and maximum room ceiling heights, exit sizes and location
- Qualification of individuals or corporations doing the work
- For high structures, anti-collision markers for the benefit of aircraft

Building codes are generally separate from zoning ordinances, but exterior restrictions (such as setbacks) may fall into either category.

Designers use building code standards out of substantial reference books during design. Building departments review plans submitted to them before construction, issue permits [or not] and inspectors verify compliance to these standards at the site during construction.

There are often additional codes or sections of the same building code that have more specific requirements that apply to dwellings or places of business and special construction objects such as canopies, signs, pedestrian walkways, parking lots, and radio and television antennas.

Criticism

[edit]

Building codes have been criticized for contributing to housing crisis and increasing the cost of new housing to some extent, including through conflicting code between different administrators.[11] Proposed improvements include regular review and cost-benefit analysis of building codes,[12] promotion of low-cost construction materials and building codes suitable to mass production,[11]

reducing bureaucracy, and promoting transparency.[13]

History

[edit]

Antiquity

[edit]

Building codes have a long history. The earliest known written building code is included in the Code of Hammurabi,[3] which dates from circa 1772 BC.

The book of Deuteronomy in the Hebrew Bible stipulated that parapets must be constructed on all houses to prevent people from falling off.[14]

In the Chinese book of rites it mentions that ancestral temples and houses should be a certain standard length in ancient China they measured land in the chu or well field system so it was important to be precise though most of the actual lengths are lost or obscure.[15][16]

In ancient Japan a certain official destroyed a courtiers house because the size was above his rank.[17]

Modern era

[edit]

France

[edit]

In Paris, under the reconstruction of much of the city under the Second Empire (1852–70), great blocks of apartments were erected[18] and the height of buildings was limited by law to five or six stories at most.

United Kingdom

[edit]

After the Great Fire of London in 1666, which had been able to spread so rapidly through the densely built timber housing of the city, the Rebuilding of London Act 1666 was passed in the same year as the first significant building regulation.[19] Drawn up by Sir Matthew Hale, the act regulated the rebuilding of the city, required housing to have some fire resistance capacity and authorised the City of London Corporation to reopen and widen roads.[20] The Laws of the Indies were passed in the 1680s by the Spanish Crown to regulate the urban planning for colonies

throughout Spain's worldwide imperial possessions.

The first systematic national building standard was established with the Metropolitan Buildings Act 1844. Among the provisions, builders were required to give the district surveyor two days' notice before building, regulations regarding the thickness of walls, height of rooms, the materials used in repairs, the dividing of existing buildings and the placing and design of chimneys, fireplaces and drains were to be enforced and streets had to be built to minimum requirements.[21]

The Metropolitan Buildings Office was formed to regulate the construction and use of buildings throughout London. Surveyors were empowered to enforce building regulations, which sought to improve the standard of houses and business premises, and to regulate activities that might threaten public health. In 1855 the assets, powers and responsibilities of the office passed to the Metropolitan Board of Works.

United States

[edit]

The City of Baltimore passed its first building code in 1891.[22] The Great Baltimore Fire occurred in February 1904. Subsequent changes were made that matched other cities.[23] In 1904, a Handbook of the Baltimore City Building Laws was published. It served as the building code for four years. Very soon, a formal building code was drafted and eventually adopted in 1908.

The structural failure of the tank that caused the Great Molasses Flood of 1919 prompted the Boston Building Department to require engineering and architectural calculations be filed and signed. U.S. cities and states soon began requiring sign-off by registered professional engineers for the plans of major buildings.[24]

More recently, the 2015 Berkeley balcony collapse has prompted updates to California's balcony building codes, set for 2025, which include stricter material requirements, enhanced load-bearing standards, and mandatory inspections which known as SB326 and SB721.[25]These laws mandate regular inspections every six years for multifamily buildings. Property owners and HOAs are required to address any structural or waterproofing issues identified during inspections to ensure compliance and safety. Failure to comply can result in fines, increased liability, and legal consequences. The updates aim to prevent tragedies like the Berkeley collapse, which was caused by dry rot and structural failure, by ensuring the long-term safety and durability of elevated structures.[26]

Energy codes

[edit]

The current energy codes [*clarification needed*] of the United States are adopted at the state and municipal levels and are based on the International Energy Conservation Code (IECC).

Previously, they were based on the Model Energy Code (MEC). As of March 2017, the following residential codes have been partially or fully adopted by states:[27]

- 2015 IECC or equivalent (California, Illinois, Maryland, Massachusetts, Michigan, Pennsylvania, New Jersey, New York, Vermont, Washington)
- 2012 IECC or equivalent (Alabama, Connecticut, Delaware, District of Columbia, Florida, Iowa, Minnesota, Nevada, Rhode Island, Texas)
- 2009 IECC or equivalent (Arkansas, Georgia, Idaho, Indiana, Kentucky, Louisiana, Montana, Nebraska, New Hampshire, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Virginia, West Virginia, Wisconsin)
- 2006 IECC or equivalent (Utah)
- 2006 IECC or no statewide code (Alaska, Arizona, Colorado, Kansas, Maine, Mississippi, Missouri, North Dakota, South Dakota, Wyoming)

Australia

[edit]

Australia uses the National Construction Code.

See also

[edit]

- Building officials
- Construction law
- Earthquake-resistant structures
- Energy Efficiency and Conservation Block Grants
- Outline of construction
- Seismic code
- Uniform Mechanical Code
- Variance (land use) – permission to vary zoning and sometimes building to code

References

[edit]

1. **^** *CEN (2004). EN1998-5:2004 Eurocode 8: Design of structures for earthquake resistance, part 5: Foundations, retaining structures and geotechnical aspects. Brussels: European Committee for Standardization.*
2. **^** *Ching, Francis D. K.; Winkel, Steven R. (22 March 2016). Building Codes Illustrated: A Guide to Understanding the 2015 International Building Code. John Wiley & Sons. ISBN 978-1-119-15095-4.*
3. ^ ***a b*** *"Hammurabi's Code of Laws". eawc.evansville.edu. Archived from the original on 9 May 2008. Retrieved 24 May 2008.*

4. ^ *"About ICC". www.iccsafe.org. Retrieved 8 December 2013.*
5. ^ *Canada, Government of Canada. National Research Council. "Codes Canada - National Research Council Canada". www.nrc-cnrc.gc.ca. Retrieved 1 April 2018.*
6. ^ Northampton Borough Council, Building Control - regularisation charges www.northampton.gov.uk Archived 11 May 2021 at the Wayback Machine, accessed 15 March 2021
7. ^ NYC Construction Codes www.nyc.gov Archived 2 July 2006 at the Wayback Machine
8. ^ National Building Code www.bis.org.in
9. ^ Hageman, Jack M., and Brian E. P. Beeston. *Contractor's guide to the building code*. 6th ed. Carlsbad, CA: Craftsman Book Co., 2008. 10. Print.
10. ^ Wexler, Harry J., and Richard Peck. *Housing and local government: a research guide for policy makers and planners*. Lexington, Mass. u.a.: Lexington Books, 1974. 53. Print.
11. ^ ***a b*** *Listokin, David; Hattis, David B. (2005). "Building Codes and Housing". Cityscape.* ***8*** *(1). US Department of Housing and Urban Development: 21–67. ISSN 1936-007X. JSTOR 20868571. Retrieved 25 July 2024.*
12. ^ *Nwadike, Amarachukwu Nnadozie; Wilkinson, Suzanne (3 February 2022). "Why amending building codes? An investigation of the benefits of regular building code amendment in New Zealand". International Journal of Building Pathology and Adaptation.* ***40*** *(1): 76–100. doi:10.1108/IJBPA-08-2020-0068. ISSN 2398-4708.*
13. ^ *Nwadike, Amarachukwu; Wilkinson, Suzanne (2021). "Promoting Performance-Based Building Code Compliance in New Zealand". Journal of Performance of Constructed Facilities.* ***35*** *(4). doi:10.1061/(ASCE)CF.1943-5509.0001603. ISSN 0887-3828.*
14. ^ Deuteronomy 22:8
15. ^ *Confucius (29 August 2016). Delphi Collected Works of Confucius - Four Books and Five Classics of Confucianism (Illustrated). Delphi Classics. ISBN 978-1-78656-052-0.*
16. ^ *Mencius (28 October 2004). Mencius. Penguin UK. ISBN 978-0-14-190268-5.*
17. ^ *Shonagon, Sei (30 November 2006). The Pillow Book. Penguin UK. ISBN 978-0-14-190694-2.*
18. ^ New International Encyclopedia
19. ^ 'Charles II, 1666: An Act for rebuilding the City of London.', Statutes of the Realm: volume 5: 1628–80 (1819), pp. 603–12. URL: british-history.ac.uk, date accessed: 8 March 2007.
20. ^ 'Book 1, Ch. 15: From the Fire to the death of Charles II', A New History of London: Including Westminster and Southwark (1773), pp. 230–55. URL: http://www.british-history.ac.uk/report.asp?compid=46732. Date accessed: 7 March 2007.
21. ^ *"A Brief History of Building Regulations". www.npt.gov.uk.*
22. ^ *Baltimore (Md.) (1891). Ordinances and Resolutions of the Mayor and City Council of Baltimore ... – via books.google.com.*
23. ^ Baltimore: The Building of an American City, Sherry H. Olson, Published 1997, Johns Hopkins University Press, Baltimore (Md.), ISBN 0-8018-5640-X, p. 248.
24. ^ *Puleo, Stephen (2004). Dark Tide: The Great Boston Molasses Flood of 1919. Beacon Press. ISBN 0-8070-5021-0.*
25. ^ *"SB 721- CHAPTERED". leginfo.legislature.ca.gov. Retrieved 15 January 2025.*
26. ^ *gh, amir (18 December 2024). "California Balcony Building Code Updates 2025 - DrBalcony". Retrieved 15 January 2025.*cite web: CS1 maint: url-status (link)

27. **^** *"Residential Code Status | The Building Codes Assistance Project". bcapcodes.org. 12 November 2015. Retrieved 11 September 2018.*

External links

[edit]

Image not found or type unknown

Wikimedia Commons has media related to ***Building and Fire Code Violations***.

- IAPMO Website
- IAPMO Codes Website

- v
- t
- e

Construction

Types	○ Home construction ○ Offshore construction ○ Underground construction ○ Tunnel construction
History	○ Architecture ○ Construction ○ Structural engineering ○ Timeline of architecture ○ Water supply and sanitation

Professions	○ Architect ○ Building engineer ○ Building estimator ○ Building officials ○ Chartered Building Surveyor ○ Civil engineer ○ Civil estimator ○ Clerk of works ○ Project manager ○ Quantity surveyor ○ Site manager ○ Structural engineer ○ Superintendent
Trades workers (List)	○ Banksman ○ Boilermaker ○ Bricklayer ○ Carpenter ○ Concrete finisher ○ Construction foreman ○ Construction worker ○ Electrician ○ Glazier ○ Ironworker ○ Millwright ○ Plasterer ○ Plumber ○ Roofer ○ Steel fixer ○ Welder

Organizations	○ American Institute of Constructors (AIC) ○ American Society of Civil Engineers (ASCE) ○ Asbestos Testing and Consultancy Association (ATAC) ○ Associated General Contractors of America (AGC) ○ Association of Plumbing and Heating Contractors (APHC) ○ Build UK ○ Construction History Society ○ Chartered Institution of Civil Engineering Surveyors (CICES) ○ Chartered Institute of Plumbing and Heating Engineering (CIPHE) ○ Civil Engineering Contractors Association (CECA) ○ The Concrete Society ○ Construction Management Association of America (CMAA) ○ Construction Specifications Institute (CSI) ○ FIDIC ○ Home Builders Federation (HBF) ○ Lighting Association ○ National Association of Home Builders (NAHB) ○ National Association of Women in Construction (NAWIC) ○ National Fire Protection Association (NFPA) ○ National Kitchen & Bath Association (NKBA) ○ National Railroad Construction and Maintenance Association (NRC) ○ National Tile Contractors Association (NTCA) ○ Railway Tie Association (RTA) ○ Royal Institution of Chartered Surveyors (RICS) ○ Scottish Building Federation (SBF) ○ Society of Construction Arbitrators
By country	○ India ○ Iran ○ Japan ○ Romania ○ Turkey ○ United Kingdom ○ United States
Regulation	○ Building code ○ Construction law ○ Site safety ○ Zoning

Architecture

- Style
  - List
- Industrial architecture
  - British
- Indigenous architecture
- Interior architecture
- Landscape architecture
- Vernacular architecture

Engineering

- Architectural engineering
- Building services engineering
- Civil engineering
  - Coastal engineering
  - Construction engineering
  - Structural engineering
- Earthquake engineering
- Environmental engineering
- Geotechnical engineering

Methods

- List
- Earthbag construction
- Modern methods of construction
- Monocrete construction
- Slip forming

- Building material
  - List of building materials
  - Millwork
- Construction bidding
- Construction delay
- Construction equipment theft
- Construction loan
- Construction management
- Construction waste
- Demolition
- Design–build
- Design–bid–build
- DfMA
- Heavy equipment
- Interior design

Other topics

- Lists of buildings and structures
  - List of tallest buildings and structures
- Megaproject
- Megastructure
- Plasterwork
  - Damp
    - Proofing
  - Parge coat
  - Roughcast
    - Harling
- Real estate development
- Stonemasonry
- Sustainability in construction
- Unfinished building
- Urban design
- Urban planning

Image not found or type unknown Outline Image not found or type unknown Category

About ceiling

For other uses, see Ceiling (disambiguation).

Image not found or type unknown

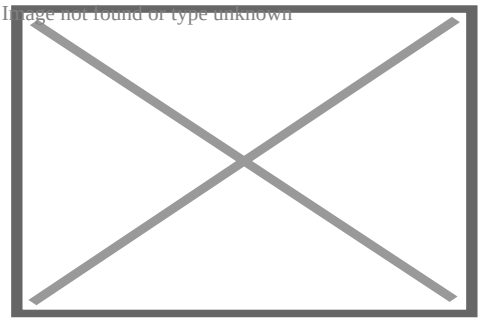


Image not found or type unknown

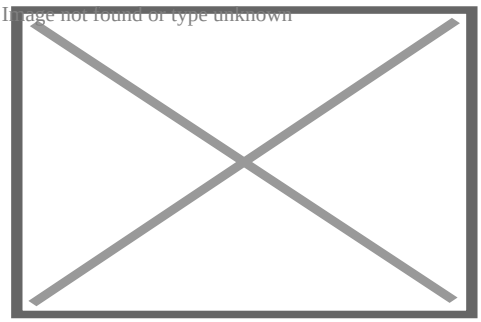


Image not found or type unknown

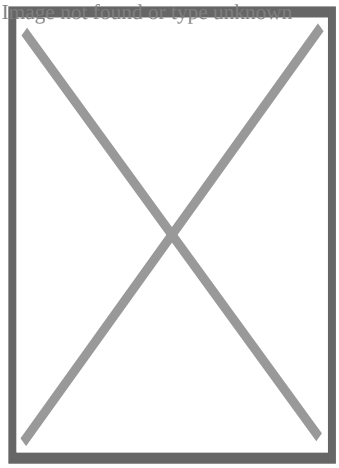


Image not found or type unknown

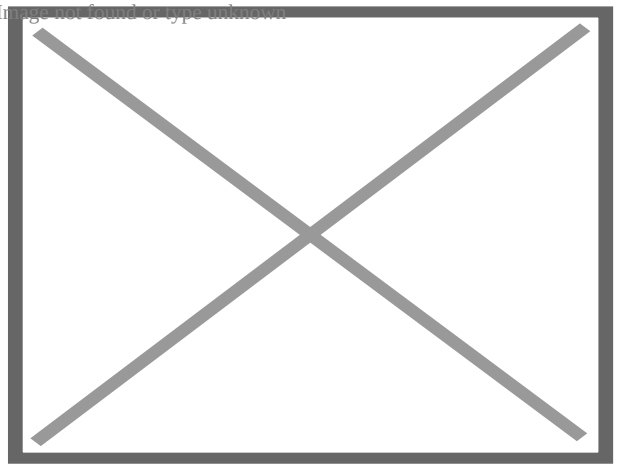


Image not found or type unknown

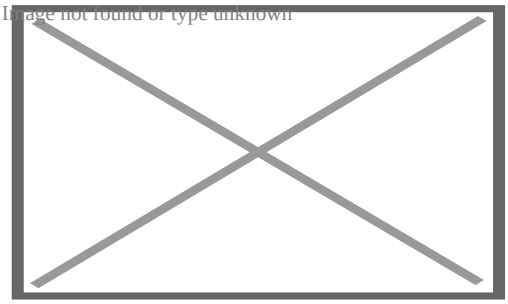
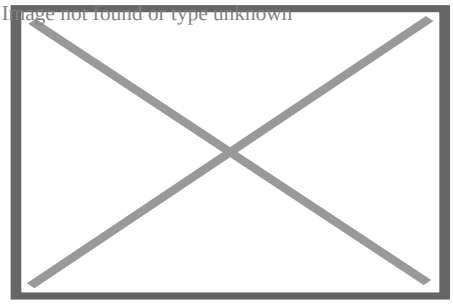


Image not found or type unknown



Various examples of ornate ceilings

A **ceiling** /?si?l??/ is an overhead interior roof that covers the upper limits of a room. It is not generally considered a structural element, but a finished surface concealing the underside of the roof structure or the floor of a story above. Ceilings can be decorated to taste, and there are many examples of frescoes and artwork on ceilings, especially within religious buildings. A ceiling can also be the upper limit of a tunnel.

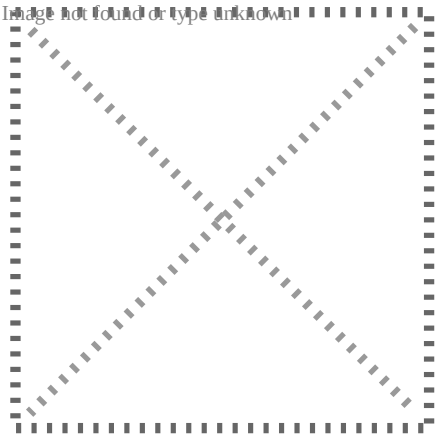
The most common type of ceiling is the dropped ceiling,[*citation needed*] which is suspended from structural elements above. Panels of drywall are fastened either directly to the ceiling joists or to a few layers of moisture-proof plywood which are then attached to the joists. Pipework or ducts can be run in the gap above the ceiling, and insulation and fireproofing material can be placed here. Alternatively, ceilings may be spray painted instead, leaving the pipework and ducts exposed but painted, and using spray foam.

A subset of the dropped ceiling is the suspended ceiling, wherein a network of aluminum struts, as opposed to drywall, are attached to the joists, forming a series of rectangular spaces. Individual pieces of cardboard are then placed inside the bottom of those spaces so that the outer side of the cardboard, interspersed with aluminum rails, is seen as the ceiling from below. This makes it relatively easy to repair the pipes and insulation behind the ceiling, since all that is necessary is to lift off the cardboard, rather than digging through the drywall and then replacing it.

Other types of ceiling include the cathedral ceiling, the concave or barrel-shaped ceiling, the stretched ceiling and the coffered ceiling. Coving often links the ceiling to the surrounding walls. Ceilings can play a part in reducing fire hazard, and a system is available for rating the fire resistance of dropped ceilings.

Types

[edit]



California tract home with an open-beam ceiling, 1960

Ceilings are classified according to their appearance or construction. A cathedral ceiling is any tall ceiling area similar to those in a church. A dropped ceiling is one in which the finished surface is constructed anywhere from a few inches or centimeters to several feet or a few meters below the structure above it. This may be done for aesthetic purposes, such as achieving a desirable ceiling height; or practical purposes such as acoustic damping or providing a space for HVAC or piping. An inverse of this would be a raised floor. A concave or barrel-shaped ceiling is curved or rounded upward, usually for visual or acoustical value, while a coffered ceiling is divided into a grid of recessed square or octagonal panels, also called a "lacunar ceiling". A cove ceiling uses a curved plaster transition between wall and ceiling; it is named for cove molding, a molding with a concave curve.[1] A stretched ceiling (or stretch ceiling) uses a number of individual panels using material such as PVC fixed to a perimeter rail.[2]

Elements

[edit]

Ceilings have frequently been decorated with fresco painting, mosaic tiles and other surface treatments. While hard to execute (at least in place) a decorated ceiling has the advantage that it is largely protected from damage by fingers and dust. In the past, however, this was more than compensated for by the damage from smoke from candles or a fireplace. Many historic buildings have celebrated ceilings. Perhaps the most famous is the Sistine Chapel ceiling by Michelangelo.

Ceiling height, particularly in the case of low ceilings, may have psychological impacts. [3]

Fire-resistance rated ceilings

[edit]

The most common ceiling that contributes to fire-resistance ratings in commercial and residential construction is the dropped ceiling. In the case of a dropped ceiling, the rating is achieved by the entire system, which is both the structure above, from which the ceilings is suspended, which could be a concrete floor or a timber floor, as well as the suspension mechanism and, finally the lowest membrane or dropped ceiling. Between the structure that the dropped ceiling is suspended

from and the dropped membrane, such as a T-bar ceiling or a layer of drywall, there is often some room for mechanical and electrical piping, wiring and ducting to run.

An independent ceiling, however, can be constructed such that it has a stand-alone fire-resistance rating. Such systems must be tested without the benefit of being suspended from a slab above in order to prove that the resulting system is capable of holding itself up. This type of ceiling would be installed to protect items above from fire.

An unrestrained non-loadbearing ceiling undergoing a 4-hour fire test. Deflection is measured off th

- Image not found or type unknown
  An unrestrained non-loadbearing ceiling undergoing a 4-hour fire test. Deflection is measured off the I-beam.
- Durasteel ceiling after successful fire test, being raised from the furnace and readied for an optional

Image not found or type unknown
Durasteel ceiling after successful fire test, being raised from the furnace and readied for an optional 45PSI (3.1 bar) hose-stream test.

Gallery

[edit]

- Gothic ceiling in the Sainte-Chapelle, Paris, 1243-1248, by Pierre de Montreuil[4]

Image not found or type unknown

Gothic ceiling in the Sainte-Chapelle, Paris, 1243-1248, by Pierre de Montreuil[4]

Renaissance ceiling of the Henry II staircase in the Louvre Palace, Paris, by Étienne Carmoy, Raym

-

Image not found or type unknown

Renaissance ceiling of the Henry II staircase in the Louvre Palace, Paris, by Étienne Carmoy, Raymond Bidollet, Jean Chrestien and François Lheureux, 1553[5]

Renaissance ceiling of the king's bedroom in the Louvre Palace, by Francisque Scibecq de Carpi, 1

-

Image not found or type unknown

Renaissance ceiling of the king's bedroom in the Louvre Palace, by Francisque Scibecq de Carpi, 1556[6]

- Baroque ceiling of the Salle des Saisons in the Louvre Palace, by Giovanni Francesco Romanelli, M

Image not found or type unknown

Baroque ceiling of the Salle des Saisons in the Louvre Palace, by Giovanni Francesco Romanelli, Michel Anguier and Pietro Sasso, mid 17th century[7]

- Neoclassical ceiling of the Salle Duchâtel in the Louvre Palace, with The Triumph of French Paintin

Image not found or type unknown

Neoclassical ceiling of the Salle Duchâtel in the Louvre Palace, with The Triumph of French Painting. Apotheosis of

Poussin, Le Sueur and Le Brun in the centre, by Charles Meynier, 1822, and ceilings panels with medallion portraits of French painters, 1828-1833[8]

- Neoclassical ceiling of the Mollien staircase in the Louvre Palace, designed by Hector Lefuel in 185

Image not found or type unknown

Neoclassical ceiling of the Mollien staircase in the Louvre Palace, designed by Hector Lefuel in 1857 and painted by Charles Louis Müller in 1868-1870[9]

Moorish Revival ceiling in the Nicolae T. Filitti/Nae Filitis House (Calea Doroban?ilor no. 18), Bucha

-

Image not found or type unknown

Moorish Revival ceiling in the Nicolae T. Filitti/Nae Filitis House (Calea Doroban?ilor no. 18), Bucharest, Romania, de Ernest Doneaud, c.1910[10]

Demonstrative reconstruction of a Roman suspended ceiling in an Imperial palace of circa AD 306 a

- Image not found or type unknown
  Demonstrative reconstruction of a Roman suspended ceiling in an Imperial palace of circa AD 306 at Trier, Italy
- Part of the ceiling of the Sistine Chapel in Vatican City in Rome, showing the ceiling in relation to th

Image not found or type unknown
Part of the ceiling of the Sistine Chapel in Vatican City in Rome, showing the ceiling in relation to the other frescoes

Ceiling of the Villa Schutzenberger from Strasbourg, France, decorated with Art Nouveau ornament

- Image not found or type unknown
  Ceiling of the Villa Schutzenberger from Strasbourg, France, decorated with Art Nouveau ornaments

- Painted ceiling in Liège, Belgium

Image not found or type unknown

Painted ceiling in Liège, Belgium

- Traditional Chinese ceiling of Dayuan Renshou Temple at Taoyuan, Taiwan

Image not found or type unknown

Traditional Chinese ceiling of Dayuan Renshou Temple at Taoyuan, Taiwan

- Dropped ceiling

Image not found or type unknown

Dropped ceiling

- Wooden beam ceiling

Image not found or type unknown

Wooden beam ceiling

See also

[edit]

- Beam ceiling
- Hammerbeam roof
- Hollow-core slab
- Moulding (decorative)
- Popcorn ceiling
- Scottish Renaissance painted ceilings
- Tin ceiling
- Passive fire protection
- Fire test
- Hy-Rib

References

[edit]

1. **^** *"Casa de las Ratas 2/2/2003". Archived from the original on September 29, 2008. Retrieved September 14, 2008.*
2. **^** *Corky Binggeli (2011). Interior Graphic Standards: Student Edition. John Wiley & Sons. p. 220. ISBN 978-1-118-09935-3.*
3. **^** *Meyers-Levy, Joan; Zhu, Rui (Juliet) (August 2007). "The Influence of Ceiling Height: The Effect of Priming on the Type of Processing That People Use". Journal of Consumer Research.* ***34*** *(2): 174–186. doi:10.1086/519146. JSTOR 10.1086/519146. S2CID 16607244.*
4. **^** *Melvin, Jeremy (2006). …isme S? În?elegem Stilurile Arhitecturale (in Romanian). Enciclopedia RAO. p. 39. ISBN 973-717-075-X.*
5. **^** *Bresc-Bautier, Geneviève (2008). The Louvre, a Tale of a Palace. Musée du Louvre Éditions. p. 26. ISBN 978-2-7572-0177-0.*
6. **^** *Bresc-Bautier, Geneviève (2008). The Louvre, a Tale of a Palace. Musée du Louvre Éditions. p. 30. ISBN 978-2-7572-0177-0.*
7. **^** *Bresc-Bautier, Geneviève (2008). The Louvre, a Tale of a Palace. Musée du Louvre Éditions. p. 55. ISBN 978-2-7572-0177-0.*
8. **^** *Bresc-Bautier, Geneviève (2008). The Louvre, a Tale of a Palace. Musée du Louvre Éditions. p. 106. ISBN 978-2-7572-0177-0.*
9. **^** *Bresc-Bautier, Geneviève (2008). The Louvre, a Tale of a Palace. Musée du Louvre Éditions. p. 138. ISBN 978-2-7572-0177-0.*
10. **^** *Marinache, Oana (2015). Ernest Donaud - visul liniei (in Romanian). Editura Istoria Artei. p. 79. ISBN 978-606-94042-8-7.*

External links

[edit]

Image not found or type unknown

Look up ***ceiling*** in Wiktionary, the free dictionary.

Image not found or type unknown

- Media related to Ceilings at Wikimedia Commons
- *"Ceiling" . Encyclopædia Britannica. Vol. 5 (11th ed.). 1911.*
- *"Ceiling" . New International Encyclopedia. 1904.*
- Merriam-Webster ceiling definition

- v
- t
- e

Rooms and spaces of a house

Shared rooms

- Bonus room
- Common room
- Den
- Dining room
- Family room
- Garret
- Great room
- Home cinema
- Kitchen
  - dirty kitchen
  - kitchenette
- Living room
- Gynaeceum
  - harem
- Andron
  - man cave
- Recreation room
  - billiard room
- Shrine
- Study
- Sunroom

Private rooms

- Bathroom
  - toilet
- Bedroom / Guest room
  - closet
- Bedsit / Miniflat
- Boudoir
- Cabinet
- Nursery

Spaces

- Atrium
- Balcony
- Breezeway
- Conversation pit
- Cubby-hole
- Deck
- Elevator
  - dumbwaiter
- Entryway/Genkan
- Fireplace
  - hearth
- Foyer
- Hall
- Hallway
- Inglenook
- Lanai
- Loft
- Loggia
- Overhang
- Patio
- Porch
  - screened
  - sleeping
- Ramp
- Secret passage
- Stairs/Staircase
- Terrace
- Veranda
- Vestibule

Technical, utility and storage	○ Attic ○ Basement ○ Carport ○ Cloakroom ○ Closet ○ Crawl space ○ Electrical room ○ Equipment room ○ Furnace room / Boiler room ○ Garage ○ Janitorial closet ○ Larder ○ Laundry room / Utility room / Storage room ○ Mechanical room / floor ○ Pantry ○ Root cellar ○ Semi-basement ○ Storm cellar / Safe room ○ Studio ○ Wardrobe ○ Wine cellar ○ Wiring closet ○ Workshop

Great house areas

- Antechamber
- Ballroom
- Kitchen-related
  - butler's pantry
  - buttery
  - saucery
  - scullery
  - spicery
  - still room
- Conservatory / Orangery
- Courtyard
- Drawing room
- Great chamber
- Great hall
- Library
- Long gallery
- Lumber room
- Parlour
- Sauna
- Servants' hall
- Servants' quarters
- Smoking room
- Solar
- State room
- Swimming pool
- Turret
- Undercroft

Other

- Furniture
- Hidden room
- House
  - house plan
  - styles
  - types
- Multi-family residential
- Secondary suite
- Duplex
- Terraced
- Detached
- Semi-detached
- Townhouse
- Studio apartment

Architectural elements	○ Arch
	○ Balconet
	○ Baluster
	○ Belt course
	○ Bressummer
	○ Ceiling
	○ Chimney
	○ Colonnade / Portico
	○ Column
	○ Cornice / Eaves
	○ Dome
	○ Door
	○ Ell
	○ Floor
	○ Foundation
	○ Gable
	○ Gate
	  ○ Portal
	○ Lighting
	○ Ornament
	○ Plumbing
	○ Quoins
	○ Roof
	  ○ shingles
	○ Roof lantern
	○ Sill plate
	○ Style
	  ○ list
	○ Skylight
	○ Threshold
	○ Transom
	○ Vault
	○ Wall
	○ Window

Related

- Backyard
- Driveway
- Front yard
- Garden
  - roof garden
- Home
- Home improvement
- Home repair
- Shed
- Tree house

- Image not found or type unknown Category: Rooms

Authority control databases: National Image not found or type unknown **Edit this at Wikidata**

- Germany
- United States
- France
- BnF data
- Japan
- Czech Republic
  - 2
- Spain
- Israel

About Cook County

Photo

Image not found or type unknown
Photo

Image not found or type unknown
Photo

Image not found or type unknown
Photo

Image not found or type unknown

Things To Do in Cook County

Photo

Sand Ridge Nature Center

4.8 (96)

Photo

River Trail Nature Center

4.6 (235)

Photo

Palmisano (Henry) Park

4.7 (1262)

Driving Directions in Cook County

Driving Directions From Palmisano (Henry) Park to

Driving Directions From Lake Katherine Nature Center and Botanic Gardens to

Driving Directions From Navy Pier to

**https://www.google.com/maps/dir/Navy+Pier/United+Structural+Systems+of+Illinois%2C+In
87.6050944,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-
87.6050944!2d41.8918633!1m5!1m1!1sChIJ-wSxDtinD4gRiv4kY3RRh9U!2m2!1d-
88.1396465!2d42.0637725!3e0**

**https://www.google.com/maps/dir/Lake+Katherine+Nature+Center+and+Botanic+Gardens/U
87.8010774,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-
87.8010774!2d41.6776048!1m5!1m1!1sChIJ-wSxDtinD4gRiv4kY3RRh9U!2m2!1d-
88.1396465!2d42.0637725!3e2**

**https://www.google.com/maps/dir/Palmisano+%28Henry%29+Park/United+Structural+Syste
87.6490151,14z/data=!3m1!4b1!4m14!4m13!1m5!1m1!1sunknown!2m2!1d-
87.6490151!2d41.8429903!1m5!1m1!1sChIJ-wSxDtinD4gRiv4kY3RRh9U!2m2!1d-
88.1396465!2d42.0637725!3e1**

Reviews for

Image not found or type unknown

Jeffery James

(5)

Very happy with my experience. They were prompt and followed through, and very helpful in fixing the crack in my foundation.

Image not found or type unknown

Sarah McNeily

(5)

USS was excellent. They are honest, straightforward, trustworthy, and conscientious. They thoughtfully removed the flowers and flower bulbs to dig where they needed in the yard, replanted said flowers and spread the extra dirt to fill in an area of the yard. We've had other services from different companies and our yard was really a mess after. They kept the job site meticulously clean. The crew was on time and friendly. I'd recommend them any day! Thanks to Jessie and crew.

Image not found or type unknown

Jim de Leon

(5)

It was a pleasure to work with Rick and his crew. From the beginning, Rick listened to my concerns and what I wished to accomplish. Out of the 6 contractors that quoted the project, Rick seemed the MOST willing to accommodate my wishes. His pricing was definitely more than fair as well. I had 10 push piers installed to stabilize and lift an addition of my house. The project commenced at the date that Rick had disclosed initially and it was completed within the same time period expected (based on Rick's original assessment). The crew was well informed, courteous, and hard working. They were not loud (even while equipment was being utilized) and were well spoken. My neighbors were very impressed on how polite they were when they entered / exited my property (saying hello or good morning each day when they crossed paths). You can tell they care about the customer concerns. They ensured that the property would be put back as clean as possible by placing MANY sheets of plywood down prior to excavating. They compacted the dirt back in the holes extremely well to avoid large stock piles of soils. All the while, the main office was calling me to discuss updates and expectations of completion. They provided waivers of lien, certificates of insurance, properly acquired permits, and JULIE locates. From a construction background, I can tell you that I did not see any flaws in the way they operated and this an extremely professional company. The pictures attached show the push piers added to the foundation (pictures 1, 2 & 3), the amount of excavation (picture 4), and the restoration after dirt was placed back in the pits and compacted (pictures 5, 6 & 7). Please notice that they also sealed two large cracks and steel plated these cracks from expanding further (which you can see under my sliding glass door). I, as well as my wife, are extremely happy that we chose United Structural Systems for our contractor. I would happily tell any of my friends and family to use this contractor should the opportunity arise!

Image not found or type unknown

Chris Abplanalp

(5)

USS did an amazing job on my underpinning on my house, they were also very courteous to the proximity of my property line next to my neighbor. They kept things in order with all the dirt/mud they had to excavate. They were done exactly in the timeframe they indicated, and the contract was very details oriented with drawings of what would

be done. Only thing that would have been nice, is they left my concrete a little muddy with boot prints but again, all-in-all a great job

Image not found or type unknown

Dave Kari

(5)

What a fantastic experience! Owner Rick Thomas is a trustworthy professional. Nick and the crew are hard working, knowledgeable and experienced. I interviewed every company in the area, big and small. A homeowner never wants to hear that they have foundation issues. Out of every company, I trusted USS the most, and it paid off in the end. Highly recommend.

Checking for Stair-Step Cracks Along Walls**View GBP**

Check our other pages :

- **Discovering Polyurethane Foam Applications**
- **Reviewing Concrete Piers for Structural Stability**
- **Observing Signs of Settlement in Floors**
- **Recognizing Shifts in the Home Foundation**

United Structural Systems of Illinois, Inc

Phone : +18473822882

City : Hoffman Estates

State : IL

Zip : 60169

Address : 2124 Stonington Ave

Google Business Profile

Company Website : **https://www.unitedstructuralsystems.com/**

USEFUL LINKS

Residential Foundation Repair Services

home foundation repair service

Foundation Repair Service