



- **Understanding Shifting Soils in Changing Seasons**
Understanding Shifting Soils in Changing Seasons Early Signs of Drainage Issues in Wet Climates Identifying Freeze and Thaw Patterns in Foundation Movement Monitoring Summer Drought Effects on Concrete Recognizing the Role of Poor Grading in Soil Settlement Observing Spring Rains That Affect Foundation Stability Evaluating Temperature Fluctuations and Their Impact on Slab Integrity Addressing Expanding Clay in Variable Weather Managing Water Accumulation Around Foundation Walls Tracking Seasonal Rainfall Data for Preventive Measures Comparing Different Regional Climate Patterns for Foundation Health Avoiding Oversaturation With Proper Yard Drainage
- **Recognizing Early Hairline Fractures in Basement Walls**
Recognizing Early Hairline Fractures in Basement Walls Distinguishing Between Vertical and Horizontal Surface Damage Analyzing Stair Step Gaps in Block Foundations Documenting Minor vs Severe Concrete Breaks Assessing Widening Cracks Over Time Understanding the Structural Differences in Masonry Splits Investigating Settlement Issues Behind Corner Separation Monitoring Spreading Lines With Simple Measuring Tools Tracking Subtle Changes in Fracture Patterns Identifying Crumbling Areas in Older Homes Differentiating Structural Fractures From Cosmetic Blemishes Interpreting Hidden Cracks in Finished Basements
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Identifying Crumbling Areas in Older Homes

Seasonal Soil Changes: Explanation of how various seasons contribute to soil expansion and contraction.

As time marches on, the structures that once stood proudly as bastions of architectural achievement inevitably begin to show signs of their age. Among the many challenges faced by these aging edifices, foundation problems are both common and concerning. Identifying crumbling areas in older homes is crucial for maintaining their structural integrity and ensuring the safety and comfort of their inhabitants.

One of the most prevalent indicators of foundation problems in older homes is the appearance of cracks. These can manifest in various forms—horizontal, vertical, or stair-step patterns—and might be found on walls, floors, or even ceilings. While minor hairline cracks may simply be a sign of settling over time, larger and more pronounced fissures could indicate serious underlying issues with the foundation itself. A laser level can detect foundation settling **foundation repair services Tennessee**. Homeowners should pay particular attention to cracks that widen over time or those that appear suddenly after heavy rainfall or seismic activity.

Another telltale sign is doors and windows that no longer function as they should. When a home's foundation shifts or settles unevenly, it can cause frames to become misaligned, making it difficult to open or close doors and windows properly. This not only poses an inconvenience but also suggests potential structural issues that need addressing before they worsen.

Sagging floors are yet another symptom of possible foundation distress. As support beams weaken with age or as soil beneath the home shifts, floors may begin to slope noticeably. This can be particularly dangerous if left unchecked, as it might lead to further degradation of the structure's stability.

Moisture intrusion is also a red flag when assessing foundation health in older buildings.

Water stains on basement walls or persistent dampness can indicate inadequate drainage around the home's perimeter or even cracks in the foundation itself allowing water ingress. Over time, excessive moisture can undermine the foundational materials and exacerbate any pre-existing weaknesses.

Additionally, chimney separation from exterior walls often points towards foundational issues. A tilting chimney is not just an aesthetic concern; it's a warning sign that requires immediate attention since it could eventually lead to significant damage if left unresolved.

While these common signs offer valuable clues about potential foundation problems in older homes, they serve merely as initial indicators rather than definitive proof of severe structural failure. It's essential for homeowners who notice these symptoms to consult with professionals who specialize in evaluating and repairing foundations.

Identifying Crumbling Areas in Older Homes – erosion

1. property
2. steel
3. warranty

Through thorough inspection and prompt intervention, it's possible to preserve these venerable structures for generations to come while ensuring their continued safety and functionality.

In conclusion, recognizing early warning signs such as cracking walls, misaligned doors and windows, sagging floors, moisture intrusion, and chimney separation can save homeowners from costly repairs down the line and protect them from potential hazards associated with compromised foundations in aging structures. By taking proactive steps today—whether through regular inspections or engaging skilled experts—homeowners not only safeguard their investment but also honor the rich history encapsulated within these enduring landmarks.

Identifying Foundation Issues: Signs and symptoms of foundation damage caused by shifting soils. —

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- Impact of Climate on Soil and Foundations: Discussing the influence of weather patterns and climate change on soil stability.
- Methods for Monitoring Soil Movement: Techniques and tools used to track soil shifts around foundations.
- Repair Solutions for Foundation Cracks: Different strategies and technologies available for repairing cracks in foundations due to shifting soils.

- **Preventative Measures: Tips for homeowners to minimize the risk of foundation damage from seasonal soil changes.**
- **Case Studies and Real-Life Examples: Examination of past incidents where shifting soils led to significant foundation issues and subsequent repairs.**

In the world of real estate and homeownership, older homes hold a certain charm and allure. Their intricate architectural details and storied histories captivate the imagination. However, with age comes wear, and one of the most pressing concerns for owners of these seasoned properties is the integrity of their foundations. Identifying crumbling areas in older homes often requires a discerning eye to distinguish between types of foundation cracks: cosmetic versus structural.

At first glance, any crack in a home's foundation can be alarming. For many homeowners, the instinctive reaction is to assume the worst—fearing structural failure or costly repairs. However, not all cracks are created equal. Cosmetic cracks are superficial and largely harmless; they arise from minor shrinkage or settling over time. These hairline fractures are typically thin and uniform in width, commonly found in plaster walls or concrete surfaces as they naturally settle into their environment.

On the other hand, structural cracks pose a more significant threat to a home's stability and safety. These fissures often result from underlying issues such as soil erosion, poor construction practices, or significant shifts in the ground beneath the house. Structural cracks tend to be wider than cosmetic ones and may appear as horizontal lines along basement walls or large vertical splits that extend through both interior and exterior walls.

When facing foundation cracks in an older home, it is crucial to conduct a thorough assessment to determine their nature. Homeowners should look for telltale signs that could indicate structural problems: doors and windows that stick or misalign; uneven floors; or noticeable changes in wall alignment. If such symptoms accompany visible

cracking patterns, consulting with a professional structural engineer becomes imperative.

Addressing cosmetic cracks typically involves simple repairs such as patching or repainting surfaces—a relatively straightforward process that enhances aesthetic appeal without addressing deeper issues. In contrast, structural damage demands more comprehensive solutions like underpinning or reinforcing foundations to ensure long-term stability.

Older homes require regular maintenance vigilance; understanding how to identify crumbling areas by differentiating between cosmetic versus structural foundation cracks is an essential skill for preserving their legacy while safeguarding investment value. By recognizing these distinctions early on—and acting accordingly—homeowners can keep their treasured abodes standing tall for generations yet unborn.

Posted by on

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Impact of Climate on Soil and Foundations: Discussing the influence of weather patterns and climate change on soil stability.

Inspecting foundation cracks in older homes is a crucial aspect of maintaining the structural integrity and safety of the building. Over time, homes naturally settle, and this can lead to various issues, including the formation of cracks in the foundation. Identifying these problems early on is essential to prevent more serious damage and costly repairs. In this essay, we will explore some of the most effective tools and techniques for inspecting foundation cracks, with a particular focus on identifying crumbling areas in older homes.

One of the first steps in assessing foundation cracks is conducting a thorough visual inspection. This simple yet effective method requires no advanced tools but relies on careful observation.

Identifying Crumbling Areas in Older Homes - property

1. Water damage

2. Brentwood

3. Brentwood

Homeowners or inspectors should look for visible signs of cracking or crumbling around the perimeter of the home's foundation. These may appear as horizontal, vertical, or diagonal lines along walls or floors. Special attention should be given to areas where water drainage might be an issue, as moisture can exacerbate foundation deterioration.

For a more detailed assessment, utilizing measurement tools can provide valuable data regarding the severity and progression of cracks. A crack gauge is one such tool that measures changes over time by being placed across a crack and documenting any movement. Additionally, calipers can measure crack width accurately to determine if they exceed safe thresholds indicative of potential structural problems.

Another useful technique involves employing non-destructive testing methods like ground penetrating radar (GPR) or infrared thermography. GPR uses radar pulses to create images of subsurface structures without causing any damage to the property. It helps identify voids or other anomalies beneath the surface that might contribute to foundational issues. Infrared thermography detects heat variations caused by moisture intrusion or material degradation—common challenges faced by older buildings prone to crumbling.

Moisture meters also play an important role in diagnosing issues related to water infiltration—a frequent culprit behind foundation damage in aging homes. By measuring moisture levels within walls and floors surrounding suspected areas, inspectors can detect leaks early before they cause significant harm.

In some cases where external inspections yield insufficient information about internal conditions affecting foundations' stability—such as hollow-sounding spots indicating weakened materials—core sampling might be necessary despite being invasive compared with earlier mentioned techniques; however it provides invaluable insights into what lies beneath surface layers revealing composition strength enabling informed decision-making concerning repairs needed ensuring long-term resilience against further

deterioration especially when dealing specifically with historically significant properties requiring preservation efforts alongside maintenance undertakings simultaneously achieving both objectives harmoniously thereby safeguarding heritage value while enhancing functionality sustainably moving forward benefitting current occupants plus future generations alike ultimately fulfilling broader communal aspirations shared collectively amongst stakeholders invested therein wholeheartedly committed towards perpetuating cultural identity embodied throughout built environment comprehensively considered holistically encompassing all dimensions pertinent thereto thereby fostering enduring legacies cherished universally celebrated perpetually appreciated unreservedly acknowledged unequivocally embraced enduringly remembered fondly revered timelessly respected eternally honored indelibly etched profoundly inscribed enduring testaments resilient testimonies inspiring succeeding epochs continuously evolving positively transforming vibrantly thriving dynamically flourishing resplendently radiant perpetually illuminating brightly shining guiding light beacon hope prosperity peace harmony unity diversity inclusivity equity justice fairness compassion empathy love humanity solidarity fraternity mutual respect dignity grace humility wisdom understanding tolerance patience kindness generosity goodwill benevolence altruism serendipity destiny purpose meaning fulfillment satisfaction joy contentment happiness success achievement triumph victory progress growth development enrichment advancement elevation enlightenment empowerment liberation freedom autonomy agency authenticity creativity imagination innovation exploration discovery adventure curiosity wonder awe reverence gratitude appreciation celebration jubilation exultation rapture ecstasy bliss transcendence serenity tranquility calmness stillness silence quietude solitude



Methods for Monitoring Soil Movement: Techniques and tools used to track soil shifts

around foundations.

Assessing the Severity of Crumbling Areas and Necessary Repairs in older homes is crucial for maintaining both safety and property value. Older homes, with their unique charm and historical significance, often come with a set of challenges that require careful evaluation and timely intervention. As time progresses, materials age, leading to wear and deterioration that can manifest as crumbling areas—a common issue in these venerable structures.

Identifying crumbling areas begins with a thorough inspection of the home's foundation, walls, ceilings, and other structural components. This process involves looking for visible signs such as cracks in the walls or floors, flaking paint or plaster, and any noticeable shifts in the building's alignment. Homeowners should pay special attention to areas prone to moisture exposure, such as basements and bathrooms, where water damage can accelerate deterioration.

Identifying Crumbling Areas in Older Homes - Brentwood

1. email
2. hazard
3. Cookeville

Once identified, assessing the severity of these crumbling areas is critical. Not all issues pose an immediate threat; however, neglecting them can lead to more significant problems over time. For instance, superficial cracks might only require cosmetic repairs like patching or painting. In contrast, deeper structural issues could indicate foundational

instability that demands professional intervention.

The next step is determining the necessary repairs based on the severity assessment. Minor repairs might involve sealing cracks with appropriate fillers or replacing damaged sections of drywall or plaster. However, severe cases may necessitate more extensive measures such as underpinning foundations or reinforcing structural supports to ensure stability.

In addressing these repairs, it is essential to consider both short-term fixes and long-term solutions that prevent further degradation. Employing modern materials that offer enhanced durability while respecting the home's original design can help preserve its historic character while ensuring longevity.

Ultimately, regular maintenance and proactive repair strategies are vital for older homes facing issues of crumbling infrastructure. By systematically identifying problem areas and implementing appropriate remedies promptly, homeowners can safeguard their investments while preserving the aesthetic and historical value of their properties for future generations to enjoy.

Repair Solutions for Foundation Cracks: Different strategies and technologies

available for repairing cracks in foundations due to shifting soils.

In the realm of homeownership, especially with older homes, maintaining the integrity and charm of your dwelling often presents a unique set of challenges. One common issue that arises is identifying and addressing crumbling areas within the structure. Whether it's peeling paint, cracked walls, or deteriorating masonry, these signs of wear often prompt homeowners to weigh their options between do-it-yourself (DIY) repairs and seeking professional help. Understanding when to tackle a project on your own and when to call in an expert can save time, money, and ensure the safety and longevity of your home.

The allure of DIY projects is undeniable. For many homeowners, rolling up their sleeves and getting hands-on with repairs offers a sense of accomplishment and cost savings. Some issues in older homes may indeed be suitable for a DIY approach. For instance, minor surface cracks in drywall or paint flaking can often be addressed with some basic tools and materials from a local hardware store. Online tutorials provide step-by-step guidance that makes these small projects feasible for those willing to invest their time and energy.

However, while DIY solutions are appealing for their simplicity and cost-effectiveness, they come with limitations. One must recognize that not all crumbling areas are merely superficial; underlying structural issues could compromise the safety and stability of an older home if not properly assessed and repaired. This is where professional expertise

becomes invaluable.

Consider major structural elements such as foundation cracks or extensive water damage leading to mold proliferation—these issues demand professional assessment due to their complexity. Experts possess the knowledge to accurately diagnose problems that might not be immediately visible to an untrained eye. They also have access to specialized equipment required for thorough inspections and effective repairs.

Moreover, professionals bring experience honed over years working with similar structures. They can implement solutions that not only address immediate concerns but also prevent future deterioration—something that might elude even the most diligent DIY enthusiast.

Safety is another critical factor when deciding between DIY repairs and hiring professionals. Older homes may contain hazardous materials like asbestos or lead-based paints which require careful handling during renovations. Professionals are trained in safe removal procedures ensuring minimal risk to occupants' health.

Ultimately, deciding whether to pursue DIY repairs or engage professional services involves evaluating one's skill level against the complexity of the task at hand while considering potential risks involved in misjudging repair needs.

In conclusion, maintaining an older home requires a balanced approach between personal involvement through manageable DIY efforts alongside recognizing situations necessitating expert intervention for more complex issues indicative of deeper structural problems—a choice best made with informed consideration prioritizing both preservation objectives along with occupant safety assurances inherent within experienced professionals' purview when tackling significant restoration challenges posed by aging residential edifices today!



**Preventative Measures: Tips
for homeowners to minimize**

the risk of foundation damage from seasonal soil changes.

Identifying and addressing the signs of foundation issues in older homes is crucial to maintaining structural integrity and ensuring a safe living environment. As houses age, they naturally undergo various forms of wear and tear, which can manifest subtly at first but may lead to significant problems if left unchecked. By understanding preventative measures, homeowners can effectively safeguard their property from future foundation issues.

One of the primary steps in identifying potential foundation problems is conducting a thorough inspection of the home's exterior and interior. Outside, look for visible cracks in the foundation itself, especially around corners or along brick lines. Pay attention to any uneven settling or bulging walls that might indicate deeper issues beneath the surface. Inside the home, signs such as sticking doors or windows, sloping floors, or cracks in drywall can be early indicators of foundation movement.

Once these areas have been identified, implementing preventative measures becomes vital.

Identifying Crumbling Areas in Older Homes – erosion

Ensuring proper drainage around the home is one of the most effective ways to prevent water-related foundation issues. Poor drainage can lead to soil erosion or excess moisture accumulation around the foundation, both of which can cause shifts over time. Installing

gutters with downspouts that direct water away from the house and grading the landscape to slope away from the building are simple yet effective strategies.

Another important aspect is maintaining consistent moisture levels around your home's foundation. Extreme fluctuations between dry and wet conditions can lead to soil expansion and contraction, which subsequently affects foundational stability. In regions prone to droughts or heavy rainfall, using soaker hoses during dry periods or installing French drains during wet seasons can help maintain a balanced moisture level.

Furthermore, regular maintenance checks play a crucial role in preventing future issues. Scheduling professional inspections every few years allows experts to identify early warning signs that may not be immediately apparent to homeowners. These inspections often include assessing both structural components and underlying soil conditions.

In conclusion, proactive identification of crumbling areas combined with diligent application of preventative measures is key for owners of older homes wishing to avoid costly future repairs related to foundational instability. By prioritizing proper drainage systems, maintaining consistent soil moisture levels, and committing to periodic professional evaluations, homeowners not only protect their investment but also ensure their safety within their cherished living space for years to come.

About drainage

For the medical term, see Incision and drainage.

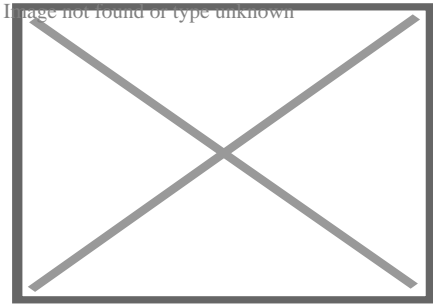
"Land drainage" redirects here. For other uses, see Land drainage (disambiguation).

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challenged and removed.

Find sources: "Drainage" – news · newspapers · books · scholar · JSTOR (September 2007) *(Learn how and when to remove this message)*



High-density polyethylene pipe installation in a storm drain project, Mexico.

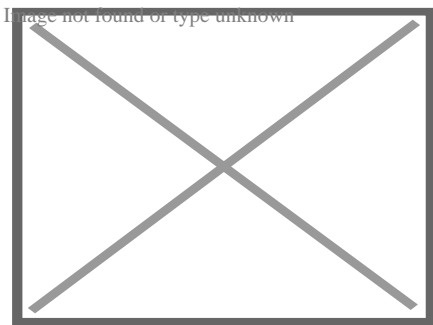
Drainage is the natural or artificial removal of a surface's water and sub-surface water from an area with excess water. The internal drainage of most agricultural soils can prevent severe waterlogging (anaerobic conditions that harm root growth), but many soils need artificial drainage to improve production or to manage water supplies.

History

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Early history

[edit]

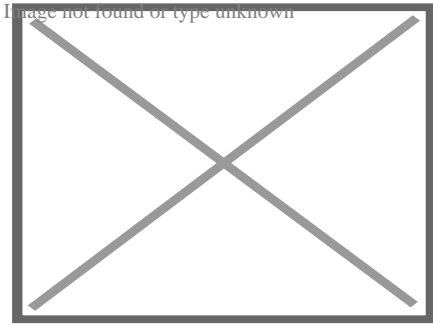


Remains of a drain at Lothal circa 3000 BC

The Indus Valley Civilization had sewerage and drainage systems. All houses in the major cities of Harappa and Mohenjo-daro had access to water and drainage facilities. Waste water was directed to covered gravity sewers, which lined the major streets.^[1]

18th and 19th century

[edit]



Tank Stream, a historical drain in the City of Sydney, Australia

The invention of hollow-pipe drainage is credited to Sir Hugh Dalrymple, who died in 1753.^[2]

Current practices

[edit]

Geotextiles

[edit]

New storm water drainage systems incorporate geotextile filters that retain and prevent fine grains of soil from passing into and clogging the drain. Geotextiles are synthetic textile fabrics specially manufactured for civil and environmental engineering applications. Geotextiles are designed to retain fine soil particles while allowing water to pass through. In a typical drainage system, they would be laid along a trench which would then be filled with coarse granular material: gravel, sea shells, stone or rock. The geotextile is then folded over the top of the stone and the trench is then covered by soil. Groundwater seeps through the geotextile and flows through the stone to an outfall. In high groundwater conditions a perforated plastic (PVC or PE) pipe is laid along the base of the drain to increase the volume of water transported in the drain.

Alternatively, a prefabricated plastic drainage system made of HDPE, often incorporating geotextile, coco fiber or rag filters can be considered. The use of these materials has become increasingly more common due to their ease of use, since they eliminate the need for transporting and laying stone drainage aggregate, which is

invariably more expensive than a synthetic drain and concrete liners.

Over the past 30 years, geotextile, PVC filters, and HDPE filters have become the most commonly used soil filter media. They are cheap to produce and easy to lay, with factory controlled properties that ensure long term filtration performance even in fine silty soil conditions.

21st century alternatives

[edit]

Seattle's Public Utilities created a pilot program called Street Edge Alternatives Project. The project focuses on designing a system "to provide drainage that more closely mimics the natural landscape prior to development than traditional piped systems".^[3] The streets are characterized by ditches along the side of the roadway, with plantings designed throughout the area. An emphasis on non-curbed sidewalks allows water to flow more freely into the areas of permeable surface on the side of the streets. Because of the plantings, the run off water from the urban area does not all directly go into the ground, but can also be absorbed into the surrounding environment. Monitoring conducted by Seattle Public Utilities reports a 99 percent reduction of storm water leaving the drainage project.^[3]

Drainage has undergone a large-scale environmental review in the recent past^[when?] in the United Kingdom. Sustainable urban drainage systems (SUDS) are designed to encourage contractors to install drainage system that more closely mimic the natural flow of water in nature. Since 2010 local and neighbourhood planning in the UK is required by law to factor SUDS into any development projects that they are responsible for.

Slot drainage is a channel drainage system designed to eliminate the need for further pipework systems to be installed in parallel to the drainage, reducing the environmental impact of production as well as improving water collection. Stainless steel, concrete channel, PVC and HDPE are all materials available for slot drainage which have become industry standards on construction projects.

In the construction industry

[edit]

The civil engineer is responsible for drainage in construction projects. During the construction process, they set out all the necessary levels for roads, street gutters, drainage, culverts and sewers involved in construction operations.

Civil engineers and construction managers work alongside architects and supervisors, planners, quantity surveyors, and the general workforce, as well as subcontractors. Typically, most jurisdictions have some body of drainage law to govern to what degree a landowner can alter the drainage from their parcel.

Drainage options for the construction industry include:

- Point drainage, which intercepts water at gullies (points). Gullies connect to drainage pipes beneath the ground surface, so deep excavation is required to facilitate this system. Support for deep trenches is required in the shape of planking, strutting or shoring.
- Channel drainage, which intercepts water along the entire run of the channel. Channel drainage is typically manufactured from concrete, steel, polymer or composites. The interception rate of channel drainage is greater than point drainage and the excavation required is usually much less deep.

The surface opening of channel drainage usually comes in the form of gratings (polymer, plastic, steel or iron) or a single slot (slot drain) that run along the ground surface (typically manufactured from steel or iron).

In retaining walls

[edit]

Earth retaining structures such as retaining walls also need to have groundwater drainage considered during their construction. Typical retaining walls are constructed of impermeable material, which can block the path of groundwater. When

groundwater flow is obstructed, hydrostatic water pressure buildups against the wall and may cause significant damage. If the water pressure is not drained appropriately, retaining walls can bow, move, and fracture, causing seams to separate. The water pressure can also erode soil particles, leading to voids behind the wall and sinkholes in the above soil. Traditional retaining wall drainage systems can include French drains, drain pipes or weep holes. To prevent soil erosion, geotextile filter fabrics are installed with the drainage system.

In planters

[edit]

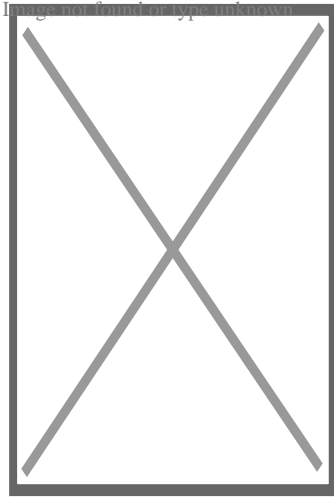
Drainage in planters refers to the implementation of effective drainage systems specifically designed for plant containers or pots. Proper drainage is crucial in planters to prevent waterlogging and promote healthy plant growth. Planter Drainage involves the incorporation of drainage holes, drainage layers, or specialized drainage systems to ensure excess water can escape from the planter. This helps to prevent root rot, water accumulation, and other issues that can negatively impact plant health. By providing adequate drainage in planters, it supports optimal plant growth and contributes to the overall success of gardening or landscaping projects.^[4]

Drainage options for the planter include:

- Surface drains are typically used to manage runoff from paved surfaces, such as sidewalks and parking lots. Catch basins, which collect water and debris, are connected to underground pipes that carry the water away from the site.^[4]
- Subsurface drains, on the other hand, are designed to manage water that seeps into the soil beneath the planting surface. French drains, which are gravel-filled trenches with perforated pipes at the bottom, are the most common type of subsurface drain. Trench drains, which are similar but shallower and wider, are also used in some situations.^[4]

Reasons for artificial drainage

[edit]



An agricultural drainage channel outside Magome, Japan after a heavy rain. Protuberances create turbulent water, preventing sediment from settling in the channel.

Wetland soils may need drainage to be used for agriculture. In the northern United States and Europe, glaciation created numerous small lakes, which gradually filled with humus to make marshes. Some of these were drained using open ditches and trenches to make mucklands, which are primarily used for high-value crops such as vegetables.

The world's largest project of this type has been in process for centuries in the Netherlands. The area between Amsterdam, Haarlem and Leiden was, in prehistoric times, swampland and small lakes. Turf cutting (peat mining), subsidence and shoreline erosion gradually caused the formation of one large lake, the Haarlemmermeer, or lake of Haarlem. The invention of wind-powered pumping engines in the 15th century permitted some of the marginal land drainage. Still, the final drainage of the lake had to await the design of large steam-powered pumps and agreements between regional authorities. The lake was eliminated between 1849 and 1852, creating thousands of km² of new land.

Coastal plains and river deltas may have seasonally or permanently high water tables and must have drainage improvements if they are to be used for agriculture. An example is the flatwoods citrus-growing region of Florida, United States. After periods of high rainfall, drainage pumps are employed to prevent damage to the citrus groves from overly wet soils. Rice production requires complete water control, as fields must

be flooded or drained at different stages of the crop cycle. The Netherlands has also led the way in this type of drainage by draining lowlands along the shore and pushing back the sea until the original nation has been greatly enlarged.

In moist climates, soils may be adequate for cropping with the exception that they become waterlogged for brief periods each year, from snow melt or from heavy rains. Soils that are predominantly clay will pass water very slowly downward. Meanwhile, plant roots suffocate because the excessive water around the roots eliminates air movement through the soil.

Other soils may have an impervious layer of mineralized soil, called a hardpan, or relatively impervious rock layers may underlie shallow soils. Drainage is especially important in tree fruit production. Soils that are otherwise excellent may be waterlogged for a week of the year, which is sufficient to kill fruit trees and cost the productivity of the land until replacements can be established. In each of these cases, appropriate drainage carries off temporary flushes of water to prevent damage to annual or perennial crops.

Drier areas are often farmed by irrigation, and one would not consider drainage necessary. However, irrigation water always contains minerals and salts, which can be concentrated to toxic levels by evapotranspiration. Irrigated land may need periodic flushes with excessive irrigation water and drainage to control soil salinity.

A typical drain in Bankstown, New South Wales

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A typical drain in Bankstown, New South Wales, Australia

See also

[edit]

- Surface drainage of the land
 - Drainage system (geomorphology), pattern of natural drains, streams, rivers, etc.
 - Land drainage in the United Kingdom – a legal and operational term in the UK to define a range of functions and responsibilities of drainage boards.
 - Surface runoff, surface runoff of excess rainfall from the land
 - Drainage system (agriculture), land forming or land shaping to enhance the drainage from the soil surface in agricultural land
 - Contour plowing, controlling runoff and soil erosion
- Subsurface (groundwater) drainage
 - Horizontal drainage by pipes and ditches
 - Tile drainage
 - Vertical drainage by wells
 - Well drainage
 - Watertable control

Otherwise:

- Bar ditch
- Building construction
- Deep drainage
- Drain commissioner
- Drain (plumbing)
- Drainage basin or watershed
- Drainage divide or watershed
- Drainage equation
- Drainage research
- Geomorphology
- Hydrologic Evaluation of Landfill Performance
- Hydrology
- John Johnston, who introduced land drainage to the United States.

- Plumbing
 - Potable cold and hot water supply
 - Septic systems
 - Sewage traps, drains, and vents
- Rain gutter
- Retaining wall
- Sewage collection and disposal
- Soil salinity control by subsurface drainage
- Storm drain
- Stormwater
- Trench drain
- Trencher (machine)
- Urban exploration



References

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1. [^] Arthur Coterell (1980). *The Encyclopedia of Ancient Civilisations*. Rainbird Publishers. pp. 176–178. ISBN 0-7112-0036-X.
2. [^] "Broadside eulogy dedicated to Patrick, Earl of Marchmount, Sir Hugh Dalrymple, and others". National Library of Scotland Digital Gallery. 1705. Retrieved 5 April 2015.
3. [^] **a b** "Street Edge Alternatives (SEA Streets) Project". Seattle.gov. Archived from the original on Dec 5, 2008.
4. [^] **a b c** "4 Expert Tips for Perfect Planter Drainage". drainservice.org. 15 April 2023. Archived from the original on June 30, 2023. Retrieved July 1, 2023.

External links

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-  Media related to Drainage at Wikimedia Commons
-  The dictionary definition of *drainage* at Wiktionary
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Agricultural water management

- Irrigation**
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 - Leaching model (soil)
 - SaltMod integrated model
 - SahysMod polygonal model: Saltmod coupled to a groundwater model

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- *See also:* Architecture
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- Davidson County, North Carolina
- Davidson County, Tennessee

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4.8 (93)

Driving Directions in Cook County

Driving Directions From Schaumburg to United Structural Systems of Illinois, Inc

Driving Directions From dr. Joanna Pozdal to United Structural Systems of Illinois, Inc

Driving Directions From Guy Dugan, MD to United Structural Systems of Illinois, Inc

Driving Directions From Hyatt Place Chicago/Hoffman Estates to United Structural Systems of Illinois, Inc

Waterproofing service

Concrete contractor

Structural engineer

foundation repair near me

foundation crack repair service

Driving Directions From Chicago's Chinatown Gateway to United Structural Systems of Illinois, Inc

Driving Directions From Shedd Aquarium to United Structural Systems of Illinois, Inc

Driving Directions From The Art Institute of Chicago to United Structural Systems of Illinois, Inc

Driving Directions From Chicago's Chinatown Gateway to United Structural Systems of Illinois, Inc

Driving Directions From Glessner House to United Structural Systems of Illinois, Inc

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[foundation crack repair service](#)

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Reviews for United Structural Systems of Illinois, Inc

United Structural Systems of Illinois, Inc

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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.

United Structural Systems of Illinois, Inc

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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.

United Structural Systems of Illinois, Inc

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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

United Structural Systems of Illinois, Inc

Image not found or type unknown

Paul Gunderlock

(4)

The staff was helpful, very nice and easy to work with and completed the work timely and cleaned up well. Communications faltered a bit at times and there was an email communications glitch which was no fault of anyone, but no big deal and all ended up fine. We sure feel better to have this done and hope that is the end of our structural issues. It does seem like (after talking to several related companies), that it would be great if some of these related companies had a structural engineer on staff vs using on the

job expertise gained over years – which is definitely valuable! But leaves a bit of uncertainty – and probably saves money for both sides may be the trade-off? So far, so good though! Thank you.

United Structural Systems of Illinois, Inc

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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!

Identifying Crumbling Areas in Older Homes [View GBP](#)

Frequently Asked Questions

How can I identify if the cracks in my homes foundation are serious enough to require repair?

Look for wide or growing cracks, uneven floors, doors/windows that stick, or water intrusion. These signs indicate structural issues needing professional assessment.

What are the common causes of foundation cracks in older homes?

Common causes include soil movement due to moisture changes, tree root growth near the foundation, poor drainage, and natural settling over time.

Can I perform DIY repairs on small foundation cracks myself?

Yes, small hairline cracks may be sealed with epoxy or polyurethane injections as a short-term fix. However, its advisable to consult a professional for a thorough inspection and long-term solutions.

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