

HOMEOWNER'S GUIDE TO TUCKPOINTING: ALL YOU WANT TO KNOW AND MORE

If you are the owner of an old brick house in the DC area, you have likely heard of tuckpointing. Also known as repointing, tuckpointing is the process by which the facades of brick structures are restored and maintained. Even the most savvy owners of historic brick homes may not know the right way to handle upkeep of a historic building's masonry. There's so much more to tuckpointing than replacing mortar.

Which buildings need tuckpointing?

Historic brick homes in Washington, DC that were built from the 1700s until the 1920s have "load bearing" masonry walls consisting only of bricks and mortar. They contain no iron, steel, or any other reinforcing structural support inside their walls. These "load bearing buildings" – meaning that their own weight provides exclusive structural integrity – were built of coal-fired clay bricks assembled with lime mortar.

Maintaining these centuries-old structures requires traditional methods and materials. There is a right way to handle the upkeep of a historic building's masonry. Tuckpointing, when done correctly with traditional methods and materials, will ensure the structural integrity, longevity, and value of buildings constructed of brick during the 18th, 19th, and early 20th centuries.

What is traditional tuckpointing?

Tuckpointing – or "repointing" – describes the restoration of historic brick buildings by removing mortar between masonry joints and replacing it with lime-based mortar. This term applies to restoration work on both building facades and chimneys. If a historic building is not tuckpointed properly, it will eventually show signs of structural damage and interior water penetration.

Why is lime mortar used?

Lime, a stone used in construction for centuries, is the core ingredient in historic mortar. Its composition, texture, and strength/level of "hardness" are compatible

with the original soft coal-fired bricks used in the construction of these historic buildings. Cement or concrete, which are modern building materials suited for new construction, are too hard for the softer brick.

If a historic building is tuckpointed with cement, the material's extreme density (or its level of hardness) will cause the softer coal-fired bricks to crack. Even worse, the chemicals in cement act like acid upon coming in contact with lime mortar because concrete and lime are incompatible in both composition and molecular structure. Removing concrete from old brick joints reveals severely compromised lime mortar underneath, that is always in worse condition than if the joint had never been “repaired.”

What are the signs of mortar deterioration?

Homeowners can easily detect the signs of deterioration.

Start with a visual inspection of the brick joints. Look for a powdery lime mortar that crumbles to the touch or is easily extracted with a key or a pencil. These joints, which appear dark or shadowed, are recessed inward from the brick faces, allowing moisture to linger on brick edges and penetrate the load bearing walls behind them.

If you find these obvious signs of mortar deterioration — particularly at eye level on ground floors — you should get a professional assessment by a with expertise in historic brick buildings. Even a few areas of deterioration can be indicative of the building's overall condition.


What is spot tuckpointing?

Many homeowners and some building professionals consider “spot tuckpointing” — filling holes with cement only where damage is most apparent — a reasonable repair, especially because it is quick and inexpensive. Although this practice is common and visible all over Washington, spot tuckpointing is merely a band-aid approach that can neither stabilize a building nor halt its continued deterioration.

How should tuckpointing be done?

Masonry contractors that specialize in tuckpointing historical buildings use traditional methods and materials for repairing and restoring brick and mortar facades. Here's what homeowners should expect:

- **Consultation with free evaluation and estimate.** Regular updates and information about all aspects of the process.
- **Comprehensive tuckpointing of all exterior walls**, regardless of their appearance or condition, rather than spot tuckpointing.
- **Scaffolding erected *per OSHA regulations*** to ensure that workers can access the entire building; ladders are inadequate and potentially dangerous.
- **Windows covered with heavy-duty plastic taped into place.** Windows of adjacent houses can also be covered with permission from neighbors.
- **A highly skilled crew of trained masons**; even a small DC row house requires a minimum crew of three workers.
- **Hand scraping of all mortar joints** – whether untouched or filled with cement – to a minimum depth of 1/2 inch.
- **Use of lime mortar** consistent in molecular content and density.
- **Tuckpointed mortar joints should be struck with a tool creating a slight concave recess in the joint** to prevent water penetration and staining on the brick wall.
- **Daily cleanup and a complete site cleanup** completed with the removal of all construction materials upon project conclusion.
- **Thorough cleaning of the newly tuckpointed wall** to remove dirt, staining, and any residual mortar left on the brick faces during the tuckpointing work.

When your historic brick home needs repair, you want to preserve its historical value. A masonry contractor with experience and expertise in historically appropriate materials and techniques will ensure that any new work complements the original quality. 

What is the best way to select a masonry contractor?

If you are the proud owner of a historic DC brick home, you will want any repair or restoration done in a manner that preserves the classic elegance and integrity of the property. That means selecting a contractor that has expertise in traditional tuckpointing methods and materials, as well as knowledge of historic buildings and neighborhoods. Here are some tips on how to find the right contractor:

Research the field. Ask friends and family for recommendations. Check with neighbors who have had work done. Check out websites of known contractors and follow up customer reviews. Select potential candidates.

Contact and interview. Describe the problem, or if possible specify the type of work that needs to be done. Most contractors will provide an onsite evaluation of the damage, the extent of the restoration, and cost estimates free of charge.

Here are some questions you might have:

- ❖ *How long will it take and when can you start?*
- ❖ *Do you help with the permits?*
- ❖ *Will there be dust inside my house and is it hazardous? If so, how will you protect my family?*
- ❖ *How much will my neighbors be disturbed?*
- ❖ *How many crew members and what is the work schedule? If needed, will they work overtime?*
- ❖ *Does the crew complete a daily cleanup of the site?*
- ❖ *Can I look at examples of your work?*