

What's Happening in Masonry

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Mortar Joint Replacement

In Chicago today many mason contractors are devoting more of their expertise in repointing (tuckpointing) existing masonry structures than constructing new masonry. A question that is asked quite often at the Masonry Advisory Council is...*What is the correct way to repoint masonry?* This question will probably become more popular in years to come as our masonry structures in Chicago continue to age and require maintenance.

Over time mortar joints deteriorate, weather, crack, move, open up and end up letting in more moisture than they were originally designed to do. Repointing is the process of removing the damaged and deteriorated mortar to a uniform depth and placing the new mortar in the joint.

Before repointing is attempted on a project we must consider that power tools used to remove the mortar may damage the faces of the brick and the repointing should be performed by a qualified tuckpointing craftsman. There should be a test such as have the craftsman repoint a sample area that is inconspicuous to evaluate and stand as an example for the work to be performed. Also if this is a historic repointing project, there are some additional steps to be taken. These steps can be found here: *Preservation Briefs No. 2, "Repointing Mortar Joints in Historic Masonry Buildings", Heritage Preservation Services, U.S. Department of the Interior, Washington, D.C., October 1998.*

The deteriorated mortar is removed with a toothing chisel or a pointer's grinder to a uniform depth that is usually at least twice the thickness of the mortar joint or until a substantial mortar hardness is found. Be careful to not cut or chip the edges of the brick and remove all dust, debris from the joint by brushing or blowing with air or water.



Mortar Joints in Need of Repointing



Repointing Mortar Joints

Mortar Joint Replacement (cont.)

Appropriate repointing mortar should be either the same mortar used on the project, which would be determined by records or testing by a testing laboratory. Usually a type N, O or K mortar are recommended. A stronger mortar may be stronger than the brick and result in trapping moisture in the joint which could lead to possible failure of the brick face.

The repointing mortar should be prehydrated. This means that the mortar should be mixed, dry ingredients only and then add only enough water to dampen the mix. This should be done 1 to 1-1/2 hours before adding enough water for placement.

The joints to be repointed should be dampened with water just lightly to help in achieving a good bond. The mortar should be packed into the joints in thin layers ¼" maximum. The joints should be tooled to match the original joints only when they are thumbprint hard. It is best to repoint all the joints in a large area instead of just doing spot repointing of only the loose joints.

If a color mortar is desired or is trying to be achieved, it is best to prepare sample panels of the desired mixes and allow each to dry to see which mortar matches the best.

This information is available at gobrick.com Technical note # 46 Maintenance of Brick Masonry.

