

# CARBON FIBER BOWED WALL STABILIZATION

TOMS RIVER, NEW JERSEY



In bowed wall cases such as this, by using carbon fiber, contractors are able to provide homeowners a more cost effective solution to repair the wall and stop any further movement than possible with conventional methods.

When installing a carbon fiber bowed wall system, the prep work of the wall is one of the most important components. If the wall is not prepared properly, the straps will not be engaged to their full capacity and failures become more likely.

Grinding and preparing the wall per the manufactures recommendations is not the only item that has to be addressed during the wall prep phase. While grinding the wall promotes higher epoxy bond strengths, repairing the damaged mortar joints is just as important.

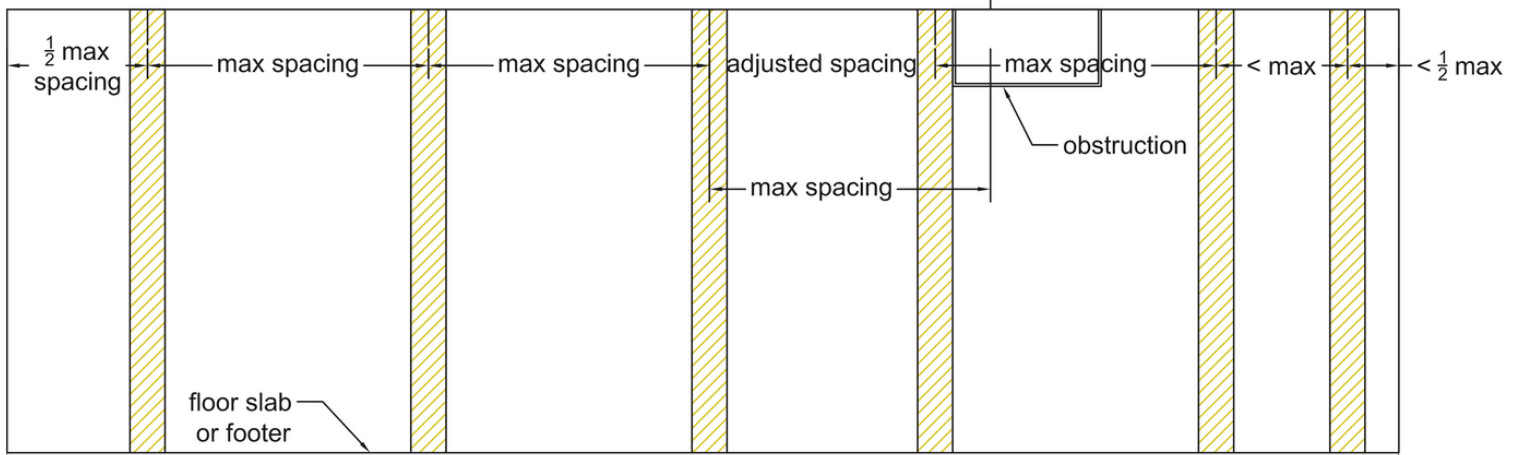
The tensile strength of the carbon fiber will resist any further inward movement of the wall, but in order to lock the wall in place, the mortar joints also need to be repaired as well. The best way to do this is the knock out the cracked mortar and completely re-tuck these joints.

## **A commercial grade Solution for bowing basement walls**

If the joints are not repaired properly, during the summer months when the moisture content of soil is lower, the wall may actually recede. Allowing this movement of the wall is not advisable as it will further deteriorate the mortar joints and could also cause a wrinkle in the carbon fiber, both of which would typically result in a service call to the contractor.

# CARBON FIBER STRENGTHENING SYSTEMS

Beams or other tie back systems provide resistance against further deflection but do not strengthen the entire height of the wall. Without adding strength from top to bottom as is achieved with the carbon fiber straps that are bonded to the entire height of the wall, failures above and below the location with the maximum amount of bow are still possible.



Excavating and pushing walls tends to be much more expensive and the access situations on the project do not always allow this. Additionally, if you are going to the expense of pushing the wall back, it's always a good idea to add reinforcement to keep the wall from bowing in again.

As you can see in the pictures above, Hydrosience thoroughly repaired the mortar joints and prepped the walls for the carbon fiber installation. The meticulous prep work and installation along with the industry's most complete carbon fiber bowed wall system provided peace of mind for the buyer of the property allowing the pending real estate transaction to go through. Hydrosience not only provided the new home owner with a lasting repair but one that will be warranted for the life of the structure.

**Expansive soils and hydrostatic pressure are the leading causes of bowed CMU walls across North America**

