



Welch, West Virginia and surrounding McDowell County have endured multiple devastating floods of the Tug Fork River over the past century, violently washing away homes and buildings. Needing a flood and retaining wall system built before the next devastating flood in Welch, the **Federal Emergency Management Agency (FEMA)** selected **Structural Foundations** as the general contractor.

A demolition company began by removing several unsalvageable commercial and industrial buildings. We then further cleared and excavated to establish specified elevations for installing the wall system foundations.



Our engineering team designed and our crew hydraulically installed **nearly 100 foundations, constructing a wall system of 800 feet in length.** Holes were drilled and each foundation was located $8'1\frac{1}{2}''$ on center. To these, steel uprights were welded, and the base of the wall was encased in poured concrete. Prefabricated concrete lagging was then set between the uprights, with backfilling and compacting operations following. **The use of our foundation technology cost dramatically less than traditional soldier pile / H-pile or poured concrete wall systems, and installed in a fraction of the time.** The wall system was finished with a structural steel C-channel cap and clad in decorative masonry, with red brick laid on the street façade.



Structural Foundations delivers cost savings, time savings, and safety for high-capacity retaining and flood walls.