

PROJECT

Grout Injection Feasibility Study
Baltimore, Maryland

CLIENT

Clayford T. Grimm PE, Inc.
Austin, Texas

Right: Injected grout (dark colored material) fills empty collar and head joints.



PROJECT DESCRIPTION

A six-story condominium building was constructed using load-bearing, concrete masonry with a clay brick masonry veneer. Specifications required that the collar joint be filled during construction; however, the contractor built the masonry without grouting the collar joint. Subsequent negotiation determined that the masonry must be reconstructed with a filled collar joint. Atkinson-Noland & Associates developed an alternative cost-effective solution where empty collar joints were filled by injecting a fluid grout into the empty joints instead of demolition and reconstruction of deficient masonry.

Sample panels were constructed to be representative of in-place construction. An injectable grout with appropriate fluidity and strength was developed and injected into the voids in the sample panels. Following injection, grout penetration was verified by nondestructive tests and visual observation of saw-cut panels. The injected grout showed excellent penetration, completely filling all cavities and unfilled joints.

SERVICES PROVIDED BY ATKINSON-NOLAND

- Grout mix development
- Specification of injection equipment and procedures
- Training of grout injection personnel
- Project quality control
- Ultrasonic pulse velocity testing for verification of grout penetration



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