



**INSPECTION DIVISION  
919.249.3418**

## INSPECTION PROCEDURES FOR GROUTED MASONRY

Grouted masonry foundation walls shall be constructed in accordance with the provisions of the 2002 North Carolina Residential Code (primarily Sections R404, R608, and R609) and ACI 530/ASCE 5/TMS 402, from which the following procedures are taken.

The footing must be approved and footing concrete placed. Any required reinforcement, including vertical bars, should be in place at time of the footing inspection, unless otherwise detailed by the design engineer.

The masonry wall will require inspection when the wall height reaches no more than 5 feet. If all construction provisions are met, then an approval will be given to grout that section of wall and to proceed with the construction of the next 5-foot vertical section of wall. An inspection will be required at each subsequent 5-foot section of wall until the wall is completed.

The wall may be constructed full height (within the parameters of Table R609.1.2) prior to grouting, where cleanouts are provided at each cell containing reinforcement, and spaced no more than 32 inches apart. The grouting shall be placed in lifts not exceeding 5 feet and special inspection shall be required when using this method of construction. The special inspector shall be a North Carolina registered Engineer or Architect or his/her qualified representative. Special concrete inspections must be scheduled with the Town of Apex inspection department and authorized prior to this procedure.

### **Duties and Responsibilities of the Special Inspector.**

The special inspector shall observe the work assigned for conformance with the approved design drawings and specifications.

The special inspector shall bring all discrepancies to the immediate attention of the contractor for correction, and if uncorrected, to the proper design authority and to the Code Enforcement Officer (CEO).

The special inspector shall submit a final signed report to the CEO, bearing the seal of the engineer or architect, stating that the work requiring special inspection was, to the best of his knowledge, in conformance with the approved plans and specifications and the applicable workmanship provision of this code.

At the Wall Grout inspection, the inspector will look at the following items:

1. Reinforcement properly spaced per the approved plan.
2. Proper clearances between the reinforcement and the masonry ( $\frac{1}{2}$  inch for course grout,  $\frac{1}{4}$  inch for fine grout or greater as required).
3. Vertical bars held in position at top and bottom and at intervals not exceeding 200 bar diameters.
4. Mortar fins over  $\frac{1}{2}$  inch and any debris removed from each cell.
5. The bottom of each cell to be substantially free from debris and mortar droppings.
6. Reinforcement properly lapped (#5 @ 30 inches, #4 @ 24 inches, #3 @ 18 inches, W1.7wire/9gage @ 9 inches if not specified by the designer).
7. All cells in vertical alignment.
8. All required cleanouts installed.
9. Footing projections.
10. Mortar joints.

Note: A foundation inspection is required after the completion of grouting. (See Residential Construction Policies and Procedures for foundation inspection requirements.)