

Policy On Retaining Wall Design And Construction Requirements

MEMO

August 7, 2008

From: Patrick Granson, Project Manager

To: Mecklenburg County Code Enforcement Customers

RE: **Policy on retaining wall design and construction requirements**

The 2006 North Carolina Building Code includes requirements for the design and construction of retaining walls. Specifically, section 1806.2 states:

Retaining systems providing a cumulative vertical relief greater than five feet in height within a horizontal distance of 50 feet or less, including retaining walls or mechanically stabilized earth walls, shall be designed under the responsible charge of the registered design professional. Retaining systems shall meet the requirements of Section 1610. Testing and inspection reports shall comply with Section 1704.1.2 and shall verify:

1. Foundation support system is adequate for the intended site conditions;
2. Measurement of the quality of construction materials for conformance with specifications;
3. Determination of similarity of actual soil conditions to those anticipated in design; and
4. Examination of backfill materials and any drainage systems for compliance with plans and specifications.

To clarify requirements for the industry and promulgate uniform enforcement processes, Mecklenburg County Code Enforcement and City of Charlotte Land Development jointly issue this policy.

Scope of requirements

These requirements will apply to all commercial construction, which include retaining walls and grades falling within the criteria described in 1806.2. In addition, the local authority may apply the criteria to residential projects where retaining walls impact public use or access areas.

Design and submittal requirements

Customers will be offered two options during the permitting process.

Option One

Submit, as part of the permit drawing set, retaining wall drawings, fully designed and detailed, and sealed by a NC Licensed Professional Engineer.

Option Two

Permit drawing set to include location and design criteria (wall height and schematic wall cross section) for retaining walls only, along with the following statement:

- "Design of all retaining walls is to be per NC Building Code section 1806.2."
- "Detailed retaining wall design drawings, sealed by a NC Licensed Engineer, will be submitted to the local authority prior to construction."
- "A NC Licensed Engineer must perform construction observation, verifying in a sealed letter to the local authority that retaining walls are constructed per the engineered drawings, in compliance with section 1806.2 of the NC Building Code."

The Local Authority may prohibit the use of Option Two when a detailed wall design is deemed necessary at the time of the building permit or site plan approval. Examples of when this may apply include:

- Detention facility retaining water
- Sites where the retaining wall is deemed "unbuildable"
- Retaining walls located on property lines
- Retaining walls not constructed of proprietary systems
- The Local Authority may expand this list at their discretion

Some retaining wall locations will require submittal to both Mecklenburg County Code Enforcement and City of Charlotte Land Development.

- Land Development staff will identify such projects in the site plan review stage.

Construction requirements

Construction of retaining walls may proceed only after detailed retaining wall design drawings, sealed by an NC Licensed Professional Engineer, are submitted to the local authority. The owners NC Licensed Professional Engineer will perform construction observation. On completion of retaining wall construction, the Engineers will submit a sealed letter to the local authority, verifying that retaining walls are constructed per the engineered drawings, in compliant with section 1806.2 of the NC Building Code.

Note: Certificates of Occupancy or Certificates of Compliance will only be issued after receipt of the Engineer's sealed letter by the local authority.

Questions regarding this City/County joint policy should be directed to:

City of Charlotte Land Development: Nan Peterson 704-336-6691

Mecklenburg County Code Enforcement: CTAC, 980-314-2633