



## **SHRINK/SWELL SOILS POLICY**

Expansive content clay soils are known to exist in many areas of Culpeper County. This classification is given to soils which exhibit a potential for shrinking and swelling. Soils of this type have a low suitability classification for building sites, basements, foundations and roads. Many areas in Culpeper County will require additional design for foundation walls, height of backfill, waterproofing, drainage, and type of backfill material.

It is imperative for permit holders to identify the soil type(s) at their proposed building site before developing foundation system plans for any proposed building(s). This can be accomplished by a soil engineer performing a soil investigation in accordance with Section 1803 of the Virginia Construction Code or by viewing the Culpeper County Shrink-Swell Soils map on the Building Department home page or on display in our office lobby located at 302 North Main Street.

Building footings, foundation walls and concrete slabs placed in areas where medium and high expansive soils exist, as defined in Section 1803.5 of the Virginia Construction Code, require special design considerations.

Authorized Persons to Perform Soil Test: Soil tests may be performed in Culpeper County by any accredited professional, who is licensed and qualified to perform said testing in accordance with the laws, rules, and regulations of the State of Virginia governing their profession.

### Soil Test/Report Requirements:

Required soil testing must be site specific and the testing report submitted to the Building Official prior to the issuance of the Building Permit or as authorized by the Building Official.

The report shall contain sufficient information to allow adequate review of the logic and assumptions underlying any conclusions reached or recommendations made. Information should be provided concerning the relative compactness of non-cohesive soils, or the relative consistency of cohesive soils and include approximate bearing capacity at the recommended footing depth.

The report shall contain recommendations concerning foundation placement and should contain recommendations for footing design if appropriate. (See Note below)

The stamp and/or seal, and signature, of the qualified professional providing the soil test information, including full address must be placed on all required reports. (NOTE: Recommendations for footings, foundations, or other building related work is design - and, as a matter of law must be provided by a qualified Virginia licensed architect or engineer.)

**RESPONSIBILITY FOR THE CORRECT LOCATION OF THE PROPOSED BUILDING SITE AND THE PROPER DESIGN AND CONSTRUCTION METHODS APPROPRIATE FOR THE SITE SOIL CONDITIONS LIES WITH THE PERMIT HOLDER AS IS APPROPRIATE UNDER THE SPECIFIC CIRCUMSTANCES.**



# SHRINK/SWELL SOILS POLICY AND FORM

Culpeper County Building Department  
302 N. Main Street  
Culpeper, VA 22701

Building Phone - 540-727-3405  
Email - BuildingGeneral@CulpeperCounty.gov

## EXPANSIVE CLAY SOILS

Expansive content clay soils are known to exist in many areas of Culpeper County. This classification is given to soils which exhibit a potential for shrinking and swelling. Soils of this type have a low suitability classification for building sites, basements, foundations and roads.

It is imperative for the permit holder to identify the soil type(s) at their proposed building site before developing foundation system plans for any proposed building(s). This can be accomplished by a soil engineer performing a soil investigation in accordance with Section 1803 of the Virginia Construction Code (Building Code) or by reviewing the Culpeper County Shrink Swell Soils map available on the Building Department website or on display in our office lobby located at 302 N. Main Street.

Building footings, foundation walls and concrete slabs placed in areas where medium and high expansive soils exist, as defined in Section 1803.5 of the Virginia Construction Code, require special design considerations.

Please choose one of the options for addressing shrink/swell soils listed below and submit this form with your building permit application. **I have read the Shrink/Swell Soils Policy and the contents of this Form AND**

- I am submitting an engineered design for shrink swell soil issues with my plans for my footing and foundation.
- I am submitting a soil engineers report indicating that there is no shrink swell soil present at the site of the structure.
- I am submitting an engineered plan that outlines the methods that are going to be utilized to stabilize the shrink swell soil that is present, and I am going to construct a foundation wall meeting the design criteria outlined in the building code for shrink swell soil.
- I am going to remove all the shrink swell soil present so that a traditional footing may be utilized, and I am going to construct a foundation wall meeting the design criteria outlined in the building code for shrink swell soil. No shrink swell soil will be used for backfill purposes.
- I have reviewed the Culpeper County soils map and my building site appears to be in an area with low shrink swell soil potential. If expansive soils are encountered during construction an engineer's design for the footing and foundation shall be required to be submitted to the building office for review and approval prior to proceeding with construction. I further understand that if shrink swell soil were to be discovered post-construction, the matter would still have to be addressed consistent with the USBC which could have significant financial implication.

For Staff Use Only:

App# \_\_\_\_\_

- Low Potential
- Moderate Potential
- High Potential

Notes:

\_\_\_\_\_/\_\_\_\_\_

Staff

Date

\_\_\_\_\_  
Applicant's Signature

\_\_\_\_\_  
Date

Applicant's Printed Name: \_\_\_\_\_