

**Town of Cape Charles**  
**Municipal Building**  
**2 Plum Street**  
**Cape Charles, VA 23310**  
**(757) 331-3259 Fax: (757) 331-4820**

**EXPANSIVE SOILS MINIMUM TESTING POLICY**

The Soil survey of Northampton County, Virginia issued in August, 1989, being a publication of the National Cooperative Soil Survey produced jointly by the National Resources Conservation Service and Virginia Polytechnic Institute and State University shall be utilized as a preliminary determinant in assessing the soil characteristics and shrink/swell potential of a building site. If these documents indicate a moderate to high shrink/swell potential of the soils at the site, additional site specific testing by a qualified individual will be required. A qualified individual shall be a Virginia registered Geotechnical Engineer or Soils Scientist.

Soil testing requirements are applicable to all construction that encloses space to be occupied for dwelling uses, commercial uses, or public occupancy. It will be determined at the time of permit application if an exemption of this requirement may be appropriate. Tests must be site specific and submitted with the building permit application. A building permit may not be issued until the appropriate soil test information has been submitted and approved. As an acceptable alternative, tests which were completed at the subdivision stage of development that have sufficient detail to show that no additional testing should be required for building construction, will be accepted.

Detached incidental structures such as private garages, decks and storage sheds only occupied for brief periods of time on an occasional basis, and less than 400 square feet in area are exempted from soils testing requirements. Other construction (primarily screened porches, stoops, attached storage areas, vestibules, and other minor additions) may be exempted from the testing requirements, on a case-by-case basis, based upon the review by the Code Official and a determination of at least one of the following:

1. That the construction proposed would be generally unaffected by the effects of expansive soils.
2. That the construction method specified is sufficient to resist the effects of expansive soils.
3. That previous soils testing information exists which is sufficient to make a determination that further soils testing is unnecessary, or that special construction techniques are not justified.
4. When a licensed design professional has assumed the presence of expansive soils and designed accordingly.

Soils testing may be done by the developer in the following manner:

1. The developer should have a soil consultant review the soil survey maps for the tracts of land;
2. Draft a general feasibility map based on the soil maps;
3. Propose roads and lots based on the map;
4. Have a qualified consultant do site specific borings and a detailed soil profile descriptions of each lot;
5. The consultant would verify the soil survey maps and that a particular site had low shrink-swell potential or would recommend additional work to be done due to the suspected presence of expansive soils.

In lieu of developer certification of a subdivision, the owner of the property shall provide site specific testing by a qualified individual in accordance with the following:

A minimum of two (2) borings shall be taken within the footprint of the proposed construction to a depth of six (6) feet or to a minimum of one (1) foot below the recommended footing depth or auger refusal, whichever occurs first.

1. If preliminary visual examination utilizing the “Unified Soils Classification Index” indicates the soils present provide little or not potential for shrink/swell, the qualified individual may elect to dispense with additional testing and submit a certificate of findings containing a description of the property and the owner’s name and address containing the stamp, seal, an signature of the Virginia registered Geotechnical Engineer or Soils Scientist. This report shall be submitted with the building permit application along with the required construction documents for review and approval prior to permit issuance.
2. Additional testing deemed necessary by the qualified individual shall be conducted in accordance with the applicable American Society for Testing and Materials (ASTM) Standards and as necessary the results submitted to a Virginia Registered Design Professional (Architect or Engineer) for proper design of the building footing and foundation system to adequately support the structure. The design shall contain the Professional stamp, seal, and signature of the design professional and shall be an integral part of the construction documents submitted for review and approval prior to issuance of the required building permit.

All reports shall bear the stamp or seal of the design professional or certified soil scientist providing the soils test information including full address and signature. Footing and foundation design or other building related work must be provided by a qualified architect or engineer.