

City of Virginia Beach
Development Services Center
DSC INFORMATION NOTICE #100
August 13, 2003

Topic: Shrink/Swell Soils - Nawney

The Virginia Uniform Statewide Building Code (USBC), to be amended later this year, will require all localities to have a policy for shrink/swell soils. Virginia Beach is fortunate to have **Nawney** as the only shrink/swell soil type found within the city. The Permits and Inspections staff has worked with the City's GIS staff to identify the shrink/swell soils on the City's maps and display the information on the City's website, along with AICUZ noise zones and floodplains.

What is the impact/importance or shrink/swell soils? *Residential dwelling structures constructed on shrink/swell soils must have engineered foundations.*

Since the shrink/swell soils information will be available on the City's website, the consultant/developer/ builder/owner will be able to use the same information as the City staff to determine the possible presence of shrink/swell soils. The consultant/developer/builder/owner may choose to challenge the map by providing a soils report prepared by a qualified professional to the Permits and Inspections when applying for a building permit or have an engineered foundation designed by a qualified professional for the structures located on the lots with shrink/swell soils.

The DSC development plan review staff will identify the possible presence of shrink/swell soils during the residential subdivision and residential site plan reviews. According to the Virginia USBC, "residential dwelling units" are single-family detached, single-family semidetached, duplex and attached/townhouse (see Comprehensive Zoning Ordinance, Section 111 for definitions).

The identification of the soil types on the City maps is not intended to be an exact placement of soil boundary lines. The inspector may still require an engineered footing if shrink/swell soils are discovered during the footing inspection.

Directions to the soils information on the City's website:

- Step 1:** Go to <http://www.vbgov.com/egov/emapping/>
- Step 2:** Choose "Advanced Maps" under the Advanced Map section in the left menu selections
- Step 3:** Find the desired area by using the zoom (+ & -) feature in the tool bar or right click on the map and use the zoom feature in the pop up menu

Step 4: Once you have scaled down to a small enough scale, all soil types and the shrink/swell soils will appear in the left menu. Select all soils or just the shrink/swell soils by clicking on the box to the left of the selection.

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