THE PRINCE GEORGE'S COUNTY GOVERNMENT
Department of Permitting, Inspections and Enforcement
Site/Road Plan Review Division

Soil–Cement Requirements

- A — Consider the **limitations**. Soil–cement is NOT suited for soils that are extremely wet or frozen; soils that have high content of deleterious materials, organic contents greater than 2%, or pH less than 5.3 (acid sulfate soils); underlying weak soils that may cause future settlement (e.g. Existing, deep uncontrolled-fill); subgrade soils that are at or within 2 ft from groundwater table; and other conditions determined before or during construction.

- B — Apply **additional mitigations** for conditions like deeply weak (loose/soft) soil. Soil–cement shall NOT be intended as a bridging agent for deeply-weak soils. It may not substitute some Subgrade/Subbase Requirements. For high groundwater, raising proposed grades or providing permanent dewatering may still be required.

- C — **Trial Lab-tests** shall be submitted in the soils report or at least 10 days prior to application to verify that the required 7-day compressive strength (250 psi) is obtainable. Also, a Quality Control Plan (QC) shall be implemented during and after the cement application. For acceptance, the QC plan shall include the following:

  1. Inspector shall be informed at least one business day in advance about any subgrade stabilization or proof-rolling per DPIE Subgrade/Subbase Requirements.

  2. Weather restriction, Contractor uniform mixing & compaction to proper depth, and cement rate mixed with the soil shall be all verified and documented by QC Tech to ensure meeting County requirements and the design rates (ASTM D-558 & D-559).

  3. In-place density/moisture shall be tested with a density gauge, ASTM D-2922 and D-3017. One-point ASTM D-1557 Modified Proctor may be used to verify compaction.

  4. During final cement application, grades shall be verified to be ONE inch below finished subgrade elevation in order to allow for the "fluffing" action while leaving enough room for total thickness (6″ or 8.5″) of DPW&T's standard pavement section. Adjusting grades after the soil–cement has set is NOT permitted. It impacts the structural integrity of the applied soil–cement.

  5. Proof-rolling and cement application shall be fully observed, documented, and certified by a licensed Geotechnical Engineer per *Requirement #6* below.

  6. Upon completion, the Geotechnical Inspector of Record (GIR) shall provide a QC Report to DPIE summarizing the construction procedures and the GIR's field observations and field tests, under cover of a letter from a MD-licensed Professional Engineer certifying that: "*the soil–cement was **constructed** and **cured** satisfactorily, as designed, based on the engineer's field observations and testing,*" not just on the engineer's opinion.

  7. Approvals may expire if inclement weather or traffic negatively affects finished grades prior to paving or completing the required 7-day curing (3+ if approved by the GIR in writing).

  8. Once applied, soil–cement shall NOT be excavated for trenches of missing utility lines. All utility crossings shall be in place prior to soil–cement application. For roads under moratorium, missing utility lines may only be placed using trenchless technology that shall not impact the integrity of the soil–cement layer.

  9. Violation to any requirement listed above may result in revoking the soil–cement approval and in requiring the removal of soil–cement, and the placement of roadway CR-6 subbase stone instead.

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