

## ORIGINATION FORM

**THE INFORMATION BELOW IS TO BE PROVIDED BY THE ORIGINATOR**

**Specification:** 914

**Subject:** Materials for Subgrade Stabilization

**Origination date:**

**Originator:** Tom O. Malerk

**Office/Phone:** 352-955-6600

**Problem statement:**

1. Contractor responsibilities were removed from Section 914 to Section 160
2. Commercial material wording was simplified.
3. Material requirements were tabled and consolidated

**Proposed solution:** The intent of this modification is to clarify the requirements for Subgrade Stabilization materials.

**Information source:**

Ben Watson	(352)-955-2935
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**Recommended Usage Note:**

**Estimated fiscal impact, if implemented:** No known financial impact.

**Implementation of these changes, if and when approved, will begin with the July 2009 letting.**



# Florida Department of Transportation

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## **M E M O R A N D U M**

**DATE:** November 26, 2008  
**TO:** Specification Review Distribution List  
**FROM:** Rudy Powell, Jr., P.E., State Specifications Engineer  
**SUBJECT:** Proposed Specification: 9140000, Stabilization Materials

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Tom Malerk of the State Materials Office to clarify the requirements for Stabilization Materials.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or to my attention via e-mail at ST986RP or rudy.powell@dot.state.fl.us. Comments received after December 24, 2008 may not be considered. Your input is encouraged.

RP/dr  
Attachment

**STABILIZATION MATERIALS.**  
**(REV 11-20-08)**

SECTION 914 (of the Supplemental Specifications) is deleted and the following substituted:

**SECTION 914**  
**MATERIALS FOR SUBGRADE-STABILIZATION *MATERIALS***

**914-1 General.**

*This Section governs materials to be used in subgrade stabilization.. In addition to any specific requirements, all materials used for stabilizing shall meet the following:*

<i>Plasticity Index (AASHTO T 90)</i>	<i>Maximum 10</i>
<i>Liquid Limit (AASHTO T 89)</i>	<i>Maximum 40</i>
<i>Passing a 3 1/2 inch screen (AASHTO T 27)</i>	<i>Minimum 97%</i>
<i>LBR</i>	<i>No Requirement</i>

~~The specification requirements of the various materials as contained in this Section are to govern their use only when these materials are used in the stabilizing of the subgrade.~~

**914-2 Materials for Type B Stabilizing (Limerock Bearing Ratio)**

**914-2.1 Commercial Materials:**

~~**914-2.1.1 General:** Materials may be either limerock, shell rock, cemented coquina or shell base sources approved *in accordance with 6-3.3.* by the Department.~~

~~**914-2.1.2 Specific Requirements for Limerock:** For limerock, carbonates of calcium and magnesium shall be at least 70%. Materials having a plasticity index of more than ten or a liquid limit greater than 40 shall not be used as a stabilizer. The gradation of limerock shall be such that 97% of these materials will pass a 3 1/2 inch sieve.~~

~~**914-2.1.3 Crushed Shell:** Crushed shell for this use shall be mollusk shell (i.e., oysters, mussels, clams, cemented coquina). Steamed shell will not be permitted.~~

~~This shell shall meet the following requirements:~~

~~Material having a plasticity index of more than ten or a liquid limit greater than 40 shall not be used as a stabilizer.~~

~~At least 97% by weight of the total material shall pass a 3 1/2 inch sieve and at least 50% by weight of the total material shall be retained on the No. 4 sieve.~~

~~Not more than 20% by weight of the total material shall pass the No. 200 sieve. The determination of the percentage passing the No. 200 sieve shall be per FM 1-T 011.~~

~~In the event that the shell meets the above requirements without crushing, crushing will not be required.~~

**914-2.2 Local Materials:** Local materials used for this stabilizing may be soils or recyclable materials such as crushed concrete, roof tiles and asphalt coated base or reclaimed pavement. However, ~~no materials~~ *materials* that deteriorate over time, cause excessive deformations, contain hazardous substances, contaminates, or do not improve the bearing capacity of the stabilized material ~~may~~ *shall not* be used. *The requirements for Organic Content*

~~are as follows: (see 914-3 for qualifying tests for these conditions.) The Contractor shall provide information or test results to the District Materials Engineer to substantiate these properties. At least 97% by weight of the total material shall pass a 3 1/2 inch sieve. Material having a plasticity index greater than ten or a liquid limit greater than 40 shall not be used as a stabilizer.~~

~~No blending of materials to meet these requirements will be permitted unless authorized by the District Materials Engineer. When blending is permitted blended material shall be tested to ensure the above requirements are met before being spread on the roadway.~~

<i>Average Organic Content* (FM1-T267)</i>	<i>Maximum 2.5%</i>
<i>Individual Organic Content Sample (FM1-T267)</i>	<i>Maximum 4 %</i>
<i>*Note: A minimum of three samples per source</i>	

**914-3 Testing of Materials for Use as Stabilizer.**

~~———— No testing of any materials proposed to be furnished by the Contractor will be made by the Department prior to the determination of the successful bidder, and the bidder shall make his own arrangements for the preliminary determination of the suitability of the particular material he proposes to use. For evaluation of deterioration and excessive deformation, each material source shall not have an average organic content (minimum of three tests) greater than 2.5% and any individual test value more than 4.0%. The organic content shall be performed in accordance with AASHTO T 267. If toxic substances, elements or compounds are suspected at concentrations defined by EPA, qualifying tests shall be performed. Test methods for these substances shall be those mandated by EPA and analyzed by a certified laboratory. All test results of the proposed stabilizing material shall be submitted to the District Materials Engineer for approval at least 14 days prior to commencement of the field stabilizing operation. The District Materials Engineer may request samples of the stabilizing material and subgrade soil for verification tests.~~