State of Illinois Department Of Transportation

CONSTRUCTION INSPECTOR'S CHECKLIST FOR SOIL MODIFICATION

While its use is not required, this checklist has been prepared to provide the field inspector a summary of easy-to-read step-by-step requirements relative to the proper construction of modified soil (Section 302 of the Standard Specifications). The following questions are based on information found in Standard Specifications, Project Procedures Guide, Construction Manual and current policy memorandums and letters.

Manual and current policy memorandums and letters.		
	Have you reviewed the contract Special Provisions, Supplemental Specifications and Plans?	
1.	GENERAL (Article 302.04)	
	Is the temperature of the soil 6 inches below the surface a minimum of 50° F (10° C) and the ambient air temperature in the shade a minimum of 45° F(7° C)?	
	Is the area to be modified limited to that which could be covered with subbase, base or pavement within the same construction season?	
2.	PROPORTIONING (Article 302.05)	
	Has the Contractor provided samples of the soil modifier and soil to be used at least 30 days prior to the construction?	
	Has the mix design been established by the Bureau of Materials prior to construction?	
3.	PREPARATION OF SUBGRADE (Article 302.06)	
	Prior to application of the modifier, is the subgrade shaped to the grades and cross sections shown on the plans?	
	Are the cut sections and/or at grade sections prepared according to Articles 301.03 and 301.04?	
4.	APPLICATION (Article 302.07)	
	Is the modifier being distributed uniformly over the surface and limited to the area which can be incorporated in the soil during the same working day?	
5.	MIXING (Article 302.08)	
	Is the modifier, soil, and water (if necessary) thoroughly mixed until a homogeneous layer is produced with 75% of the mixture smaller than 1 inch?	

Rev. 12/14/07 Soil Modification The use of fly ash may require more than one pass of a rotary speed mixer. If more than one pass is required, is 25% of the fly ash applied and mixed with the first pass and the remainder applied and mixed with the second pass? 6. **COMPACTION (Article 302.09)** Depending on the type of modifier used, is compaction beginning as follows? (1) Portland Cement, Slag Modified Portland Cement, Fly Ash: No. later than 1 hour after mixing begins. (2) Hydrated Lime, Non-Hydrated Lime: Within the same day as mixing. Lime Slurry: Within 24 hours of mixing. (3) (4) By-Product Hydrated Lime: Between 24 hours to 3 days after mixing. Is the soil compacted to a dry density of not less than 95 percent of the laboratory standard dry density? 7. FINISHING AND CURING (Article 302.10) Is the final surface shaped to the required lines, grades and cross section shown on the plans? If HMA base course, pavement (full-depth), Portland cement concrete base course, or pavement is to be constructed, is the surface of the modified soil brought to true shape and correct elevation according to Article 301.07? Is the modified soil allowed to cure for 24 hours? **DOCUMENTATION OF FINAL CONTRACT QUANTITIES (Articles 302.12 and** 8. 302.13) **Contract Quantities** a. PROCESSING MODIFIED SOILS - Sq. Yd. (Sq. Meter) If the Contractor and the Engineer have agreed in writing, (BC-981), prior to the start of work that plan quantities are acceptable, no surface area measurements will be required. Depth check documentation is still required. (Article 202.07(a)) In the absence of a signed BC 981, documentation shall be provided as follows:

PROCESSING MODIFIED SOIL - Sq. Yd. (Sq. Meter)

b.

Measured Quantities

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Surface measurements of all authorized areas, depth checks and calculations are required. The width measurement will be as shown on the plans.

LIME, FLY ASH, PORTLAND CEMENT, SLAG MODIFIED PARTLAND CEMENT - TON (M TON)

Determined by weight tickets tabulated daily. If measured in freight cars, the original signed freight bills may be accepted in lieu of measuring truckloads on an approved platform scale.

Revised to conform with the Standard Specifications for Road and Bridge Construction Adopted January 1, 2007