

Community Development Department

Standard Operating Policy #001-15

Topsoil Specification

Background

In an effort to improve water conservation measures within the city, a topsoil requirement was implemented in June of 2009. The topsoil requirement has been amended several times over the years but the current standard is triggered whenever a building permit is issued for the construction of a new principal building and requires four (4) inches of topsoil applied to all disturbed areas not otherwise improved with impervious surfacing (roofs, driveways, walkways, etc.). Topsoil is defined as black dirt composed of unconsolidated material, largely undecomposed organic matter that is a suitable foundation for vegetative growth. The composition of the topsoil shall include a well-balanced medium consistent with the requirements of Table 3877-3 in MnDOT Specification 3877C (Premium Topsoil Borrow) as seen below:

Table 3877-3 Premium Topsoil Borrow Requirement		
	Minimum	Maximum
Material Passing 2.0 mm (#10) Sieve	95%	--
Clay	10%	25%
Silt	25%	60%
Sand & Gravel	25%	60%
Organic Matter	5%	15%
pH	6.0	7.1
Soluble Salts	--	0.15 siemens/m 1.5 mmho/cm

Issue

In 2014, MnDOT published a new Specifications Book: Standard Specifications for Construction. This current edition does not include the Premium Topsoil Specification identified in Ramsey City Code. Thus, the definition of topsoil in City Code references a MnDOT Specification that no longer exists.

Interim Solution

The Environmental Policy Board (EPB) has reviewed the new topsoil specifications and has recommended that the City accept, at least for the interim time, material meeting MnDOT's Common Topsoil Borrow standard outlined in Table 3877-1 below. This was based on the fact that the allowable ranges for sand and organic matter within this specification most closely resemble the city's current requirement for these components. When a topsoil requirement was originally discussed by the City Council, it was these two components (sand because of the sandy soils present throughout much of the community, and organic matter because of its water holding capabilities) that were primary factors in selecting the current specification.

Table 3877-1 Common Topsoil Borrow Requirements		
Requirement	Range	Test Method
Material Passing the ¾ in [19 mm]	100 %	ASTM D 422
Material passing No. 4 [4.75 mm]	≥ 85%	—
Clay	5% – 40%	ASTM D 422
Silt	10% – 60%	ASTM D 422
Sand	20% – 65%	ASTM D 422
Organic matter	3% – 20%	ASTM D 2974
pH	6.1 – 7.8	ASTM G 51

Next Step(s)

The EPB has recommended that the City review and consider other possible water conserving strategies rather than strictly relying on topsoil. If feasible options exist, it would incorporate more flexibility into City Code, something seemingly beneficial for all. It is expected that an ordinance amendment will be brought forward in the near future addressing to formally address this matter.