

APPENDIX V

**Table 8.05b  
Manning's *n* for Structural  
Channel Linings**

<b>Channel Lining</b>	<b>Recommended <i>n</i> values</b>
Asphaltic concrete, machine placed	0.014
Asphalt, exposed prefabricated	0.015
Concrete	0.015
Metal, corrugated	0.024
Plastic	0.013
Shotcrete	0.017
Gabion	0.030
* Earth	0.020

Source: American Society of Civil Engineers (modified)

**Table 8.05d  
Maximum Permissible  
Velocities for Unprotected  
Soils in Existing Channels.**

<b>Materials</b>	<b>Maximum Permissible Velocities (fps)</b>
Fine Sand (noncolloidal)	2.5
Sand Loam (noncolloidal)	2.5
Silt Loam (noncolloidal)	3.0
Ordinary Firm Loam	3.5
Fine Gravel	5.0
Stiff Clay (very colloidal)	5.0
Graded, Loam to Cobbles (noncolloidal)	5.0
Graded, Silt to Cobbles (colloidal)	5.5
Alluvial Silts (noncolloidal)	3.5
Alluvial Silts (colloidal)	5.0
Coarse Gravel (noncolloidal)	6.0
Cobbles and Shingles	5.5

Reference: NC Erosion and Sediment Control Planning and Design Manual, pgs 8.05.6 and 8.05.9, North Carolina Department of Environmental and Natural Resources, Land Quality Section, May 1997 and June, 2006