### Office of Asst. Sec. for Housing, HUD

## Subpart C—Site Preparation

#### §3285.201 Soil conditions.

To help prevent settling or sagging, the foundation must be constructed on firm, undisturbed soil or fill compacted to at least 90 percent of its maximum relative density. All organic material such as grass, roots, twigs, and wood scraps must be removed in areas where footings are to be placed. After removal of organic material, the home site must be graded or otherwise prepared to ensure adequate drainage, in accordance with §3285.203.

# § 3285.202 Soil classifications and bearing capacity.

The soil classification and bearing capacity of the soil must be determined before the foundation is constructed and anchored. The soil classification and bearing capacity must be determined by one or more of the following methods, unless the soil bearing capacity is established as permitted in paragraph (f) of this section: (a) *Soil tests*. Soil tests that are in accordance with generally accepted engineering practice; or

(b) *Soil records*. Soil records of the applicable LAHJ; or

(c) Soil classifications and bearing capacities. If the soil class or bearing capacity cannot be determined by test or soil records, but its type can be identified, the soil classification, allowable pressures, and torque values shown in Table to §3285.202 may be used.

(d) A pocket penetrometer; or

(e) In lieu of determining the soil bearing capacity by use of the methods shown in the table, an allowable pressure of 1,500 psf may be used, unless the site-specific information requires the use of lower values based on soil classification and type.

(f) If the soil appears to be composed of peat, organic clays, or uncompacted fill, or appears to have unusual conditions, a registered professional geologist, registered professional engineer, or registered architect must determine the soil classification and maximum allowable soil bearing capacity.

### TABLE TO § 3285.202

Soil classification				Blow	
Classi- fication number	ASTM D 2487–00 or D 2488–00 (incorporated by reference, see § 3285.4)	Soil description	Allowable soil bearing pressure (psf) <sup>1</sup>	count ASTM D 1586–99	Torque probe <sup>3</sup> value <sup>4</sup> (inch-pounds)-
1		Rock or hard pan	4000 +		
2	GW, GP, SW, SP, GM, SM	Sandy gravel and gravel; very than dense and/orcemented sands;coursegravel/cobbles;preloaded	2000	40 +	More than 550.
3	GC, SC, ML, CL	silts,clays and coral. Sand; silty sand; clayey sand; siltygravel; medium dense course sands; sandygravel; and very stiff silt, sand clays.	1500	24–39	351–550.
4A	CG, MH <sup>2</sup>	Loose to medium dense sands; firm to stiff clavs and silts; alluvial fills.	1000	18–23	276–350.
4B	CH, MH <sup>2</sup>	Loose sands; firm clays; alluvial fills	1000	12-17	175–275.
5	OL, OH, PT	Uncompacted fill; peat; organic clays	Refer to 3285.202(e).	0–11	Less than 175.

Notes:

The values provided in this table have not been adjusted for overburden pressure, embedment depth, water table height, or settlement problems.

### §3285.203 Site Drainage.

(a) *Purpose*. Drainage must be provided to direct surface water away from the home to protect against erosion of foundation supports and to prevent water build-up under the home, as shown in Figure to §3285.203.

<sup>&</sup>lt;sup>2</sup> For soils classified as CH or MH, without either torque probe values or blow count test results, selected anchors must be rated for a 4B soil.

<sup>&</sup>lt;sup>3</sup>The torque test probe is a device for measuring the torque value of soils to assist in evaluating the holding capacity of the soil in which the ground anchor is placed. The shaft must be of suitable length for the full depth of the ground anchor. <sup>4</sup>The torque value is a measure of the load resistance provided by the soil when subject to the turning or twisting force of the probe.