QUICK FACTS: SB 102 DRAFT

TEX-115-E, PART I

Determining In-Place Density of Soils and Base Materials

Why

To determine the in-place density is to determine the degree of compaction or percentage of the density and moisture obtained by Tex-113-E and Tex-114-E.

When

- Item 132
- Item 247
- Item 251
- Item 260
- Item 263
- Item 265
- Item 275
- Item 276
- Special Spec. 3088
- Special Spec. 3089
- Special Spec. 3095

How

Equipment

- Nuclear testing gauge, capable of making density and moisture determinations
- Portable reference standard
- Calibration curves, for nuclear gauge
- Gauge log book
- Scraper plate and drill rod guide
- Drill rod
- Hammer or driver
- Shovel
- Sieve
- Trowel
- Straightedge
- Miscellaneous hand tools

Standardizing Equipment

- Standardize the gauge each day it is used.
- Turn on and allow gauge to warm-up 10 minutes.
- While standardizing the gauge, it must be 5 ft. from any object and 25 ft. from any other nuclear gauge.
- Use the standardizing block, take four one-minute density counts.
- Repeat the four one-minute counts in backscatter position for moisture.
- The nuclear gauge will automatically average the four one-minute density and moisture standard counts.
- Calculate the tolerance.

QUICK FACTS: SB 102 DRAFT

Procedure

- Prepare the test area flat surface free of loose material and 6 in. larger than the gauge housing.
- Fill in minor voids with sand or native fines.
  - Proper test site preparation is closely related to testing accuracy.
- Use pin, pin puller, and guide plate make a hole 2 in. deeper than the testing depth.
- Place the gauge on the prepared test surface ensure full contact with the soil or base material.
- Insert rod into the hole at the predetermined depth.
- Adjust the gauge to where the rod is firmly against the side of the hole that is nearest to the source or detector tube.
- Measure and record the number of readings required.
- Rotate the gauge 90° and repeat (Rotating the gauge is optional.)

Action

1. Report dry density to the nearest 1 kg/m^3 (0.1lb./ft.^{3}) and moisture to the nearest 0.1%.