

**Department of Transportation and Public Works
Highway and Transportation Authority
Directorate of Infrastructure**

**DESIGN DIRECTIVE 110
Information to be Included in Boring Logs
Revision: July-2024**

Boring logs shall include at least the following information:

- Name of the firm conducting the study
- Hammer energy efficiency, hammer type, drilling, sampling methods, and calibration date
- Date of beginning and completion of the borehole
- Name or number assigned to the borehole profile
- USCS and AASHTO Soil Classification as per ASTM D2487, ASTM D3282, AASHTO M-145
- Visual description/identification of soils as per ASTM D-2488, AASHTO M-145
- Depth of water table including method used, date, time, and elevation of each reading
- Density as per ASTM D7263, AASHTO T-310
- Moisture Content as per ASTM D2216, AASHTO T-265
- Liquid Limit (LL), Plasticity Index (PI), and Plastic Limit (LP) as per ASTM 4318, AASHTO T 89, and AASHTO T 90
- N-value as per ASTM D1586/1586M-18, AASHTO T-206
- Unconfined Compression Strength (Q_u) as per ASTM D2166, AASHTO T-208
- Elevation coordinates of top of borehole using NAD83
- Rock description using technical geological terms, including rock type, color, grain size and shape, texture, mineral composition, weathering, strength, and other relevant properties
- Rock core recovery
- Rock Quality Designation (RQD) as per ASTM D6032/D6032M-17
- Rock cores photos showing dimensions of their individual segments

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Additional requirements:

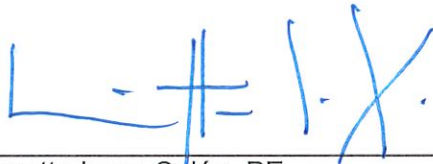
1. Boring Logs must be submitted in electronic format compatible with DIGGS (Data Interchange for Geotechnical and Geoenvironmental Specialist) and Adobe Acrobat (PDF) format.
2. When special conditions such as discontinuities, mechanical breaks, fractures, or other conditions are anticipated, a geological engineer should record rock cores.
3. The calibration of the drilling machine's hammer must be one year or less.

The information above must be included in the construction plans, as well as in the soil study of the project. Boring logs must be submitted in the format established by the Authority.

In any project, the Authority may require other parameters it deems necessary.

This guideline is effective immediately.

This Design Directive will be in effective immediately.



Lissette Lugo Colón, PE
Executive Deputy Director for Infrastructure

9/25/2024

Date