

Soil California Bearing Ratio Samples 193(A) and 194(B) Instructions for Testing and Reporting

Closing Date: May 7, 2026

General Information:

Treat each sample as you would treat a typical sample brought into the laboratory. Any special handling or preparation instructions are included below. Conduct tests on each of the two samples in accordance with the instructions below. Report the results of a single determination only, not the average of two or more unless specified in the test method or instructions.

Reporting the results to an extra decimal place beyond what is required by the test method is requested for statistical reasons and equates to more precise data that is available to analyze.

To permit an estimate of single-operator precision, the same operator should conduct an individual test on both samples. It is not necessary that the same person conduct all the tests in the sample round.

Leave the appropriate spaces on the data sheet blank for any tests you choose not to perform.

Information for AASHTO Accredited Laboratories:

AASHTO accredited laboratories are required to perform every test included in an AASHTO re:source Proficiency Sample Program that is also listed under each laboratory's AASHTO Accreditation Scope.

[AASHTO Accreditation Policy on PSP Participation](#)

Tests not included under the laboratory's accreditation may also be performed, but testing is not required, and the AASHTO Accreditation Program will not evaluate the ratings.

Sample Information:

You should receive two boxes of material for California Bearing Ratio samples 193(A) and 194(B).

Each sample box should contain one bag of soil (approximately 8.0 kg).

Sample Preparation (Compaction):

Determine the "as received" water (moisture) content of each of the two samples and report the results to the nearest 0.1%. Use AASHTO T265 or ASTM D2216 to determine the water content. Once the moisture content as received is determined, add additional moisture to accurately achieve the target moisture contents below.

Prepare one specimen per sample using the rammer specified in T99 or D698 [5.5-lb (2.5-kg)] to compact the soil in **3 layers** using **56 blows** per layer.

Compact Sample 193 (A) at a total water content of **8.5** percent.

Compact Sample 194 (B) at a total water content of **8.5** percent.

Determine the water content of the material immediately before compaction, and the water content of the unused remaining material immediately after compaction. Report the results to the nearest 0.1%.

California Bearing Ratio of Laboratory-Compacted Soils (T193-22 or D1883-21):

Before soaking the compacted specimen, determine the mass of the mold and specimen and calculate the dry unit weight of the compacted specimen before soaking. Report the dry unit weight to the nearest 0.1 lb/ft³.

Use a 10-lb surcharge for soaking and penetration. Soak the specimen for 96 hours. Report the specimen swell to the nearest 0.01 percent of the initial specimen height. Indicate a decrease in specimen height as a negative number.

During penetration, use a load cell having an appropriate capacity. Preliminary testing of the materials used for this round of testing indicated that the penetration load could reach approximately 3,000 pounds when tested to 0.500 inches of penetration.

Report the corrected CBR of the specimen at 0.1 in. and at 0.2 in. of penetration to the nearest 0.1 CBR unit. Do not rerun the test if the bearing ratio at 0.2 in. of penetration is greater than the bearing ratio at 0.1 in.