

## **Raymond F. Dawson**

Raymond F. Dawson graduated from Purdue University in 1923 with a Bachelor of Science Degree in Civil Engineering; and was employed by the Illinois Division of Highways, assigned to the Materials and Tests Division in Springfield.

At that time the Illinois Division of Highways was completing their classical research projects known as the Bates Experimental Road Tests. They had completed the test runs but were analyzing volumes of data. One question was the effect of the subgrade soils on the road test results. Dawson was assigned the laboratory work on these materials. Very little was known about the soil behavior, and there was little precedent to follow.

In 1924 Dr. Karl Terzaghi wrote a series of articles for the Engineering News-Record on the various tests used for soil identification. Using that information, Dawson supplemented the grain size tests with the Atterberg Limits and other tests Dr. Terzaghi described. Dawson then ran both grain size and plasticity tests on all samples. Finding little variance in the soil samples, it was concluded that the subgrade soils had little influence on the road tests.

Following his employment with the Illinois Division of highways, Dawson spent two years on concrete research for the U.S. Bureau of Public Roads. He was then offered the position of Testing Engineer in the Bureau of Engineering Research at The University of Texas, which he joined on October 15, 1928. The University laboratory was designated by the State Legislature as available for testing of materials for the State Highway Department. Dawson was placed in charge of the laboratory with one University employee and twelve to fifteen Highway employees under his supervision.

In January 1930, Dawson established a soils laboratory in the Bureau of Engineering Research at the University of Texas. The Bureau of Engineering Research expanded their soil research and testing in order to help Federal, State, City, County and Consulting Engineers to use the newly developed soil testing methods and procedures in their design and construction of engineered structures.

In about 1940 the Texas Section of the American Society of Civil Engineers established a Soil Mechanics and Foundation Committee with Raymond Dawson as Chairman. This committee collected information on foundation problems and failures as well as other soil information.

Prior to 1940 the National American Society of Civil Engineers had established its Soil Mechanics and Foundation Division. So as not to confuse their committee with the National Soil Mechanics and Foundation Division, the committee was renamed, with the approval of the ASCE Board of Directors, as a Technical Group, thus becoming the first technical group of ASCE. In 1996, ASCE established the Geo-Institute, replacing the geotechnical groups of the Sections and Branches.

In 1952 Dawson was elected a member of the Executive Committee of the ASCE Soil Mechanics and Foundation Engineering for a two-year term, ending in 1954, when he was elected as a National Director of ASCE.

Professor Raymond F. Dawson's own account of his career in geotechnical engineering, from which the above text was taken, can be found at:

<https://sites.utexas.edu/geotech/early-history-of-ut-geotechnical-engineering/>

References:

[San Jacinto Monument: New Soil Data and Analysis Including Subsidence](#)

[San Jacinto Monument Wikipedia](#)