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### The Civil Engineer

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*Howard University*

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# The Civil Engineer

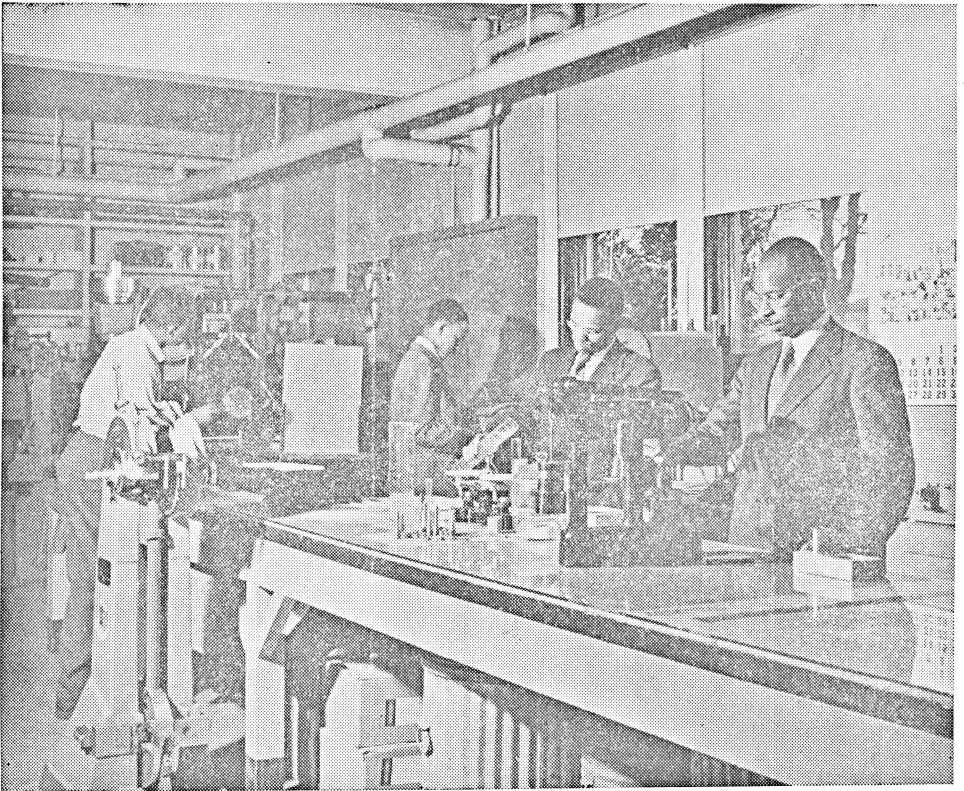
By

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Engineering has been defined as “the art and science of controlling and directing the materials and power sources in nature for the use and convenience of the human race”. The scientist discovers the laws of nature—the Engineer takes the discoveries of the scientist and converts them into useful channels for the

benefit of man. The team work of physicists, chemists, bacteriologists, other scientists and engineers brought the atomic bomb to a reality and opened up an entirely new and unlimited area of technological advancement. To Major General Leslie R. Groves, a Civil Engineer, was entrusted the coordination and



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implementation of all activities in the development of the atomic bomb project.

Early engineering was basically military in purpose and in fact. Great works of engineering come down to us from the early days of the Roman Empire. Huge aqueducts radiated from Rome to points of military operation many miles away. These assured the necessary water supply for the armies. Via Appia, a great military highway constructed of large blocks of stone four feet deep and placed by prisoners of war for the passage of troops and chariots and men 2,000 years ago was used by American troops to enter Rome in World War II. Julius Caesar was a highway engineer.

Military engineering re-converted to peace-time civilian use became known as Civil Engineering now considered the mother of all modern professional engineering. All main divisions or branches of the engineering profession have their origin in Civil Engineering.

The design, construction, and operation of dams, water supply systems, water power plants, tunnels, bridges, highways, waterways, air fields, sanitary systems, and public utilities; the

survey of public lands, control of erosion, irrigation; teaching, research, consulting service, and regional planning are among the private governmental and industrial opportunities in the life's work of the Civil Engineer.

Included among prominent Negroes in the field of Civil Engineering are: Archibald A. Alexander, builder of the Grand Rapids (Michigan) Sewage Treatment Plant, Tidal Basin Bridge, District of Columbia and other engineering projects; Charles S. Duke, Structural Engineer, Analyst, Federal Public Housing Administration; Samuel R. Cheevers, Highway Engineer and Engineering Contractor; Cornelius L. Henderson, Structural Engineer, Canadian Bridge Company; William F. Thornton, Civil Engineer, President, National Technical Association; and Archibald F. Glover, Civil Engineer, Department of Public Works, New York City.

Preparation for the profession of Civil Engineering calls for a thorough background in College Mathematics, Physics, Chemistry, Biology and the Humanities along with discipline in the professional courses allied to and in the field of Civil Engineering.