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CONCEPT DESIGN OF STRUCTURES FOR A NEW ARCHITECTURE

The world is facing dire challenges of climate change and the depletion of natural resources as a result of unsustainable population growth and industrialization. Simplicity, structural clarity, and sustainability not only define a visual quality for buildings, but also form the guiding principles for building design. It is the development of these three principles that leads to responsible design and construction the can impact climate change and reduce demands on resources.

The fundamentals of building design, particularly those related to structures that define architecture, are based on an integrated approach that considers science, application of science (engineering), productive use of space, conservation of natural resources, and long-term value. Sustainable architecture is founded in engineering concepts that are innovative whether the structure is implicit in the architecture or explicitly expressed.

Innovative concept development of structures is the most important opportunity to influence architecture. It is in this early stage of design where principles of engineering can be freely applied and where the greatest impact on simplicity, structural clarity, and sustainability can be realized.