

# DIGITAL LIBRARY BUILDING

Faculty of Engineering – Cairo University

## *INNOVATION IN EVERY DETAIL*

The Digital Library Building has been constructed in the Faculty of Engineering at Cairo University to provide access to digital resources from various disciplines which can be used for research and teaching. In addition to this functional innovation, the entire construction of the building was totally innovative from start to finish:



### *Innovative Material Selection:*

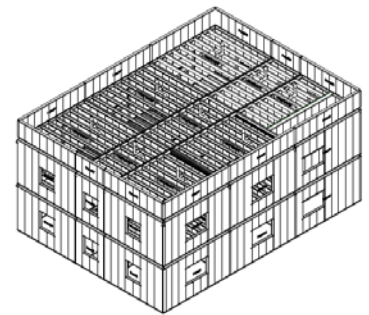
*For the first time in Egypt, Cold formed steel construction* combined with *Ferrocement floor slabs and wall boards* were selected because of their high strength-to-weight ratio, ease of production and handling, faster erection, high recycled contents, and sustainability.

### *Innovative Construction Technique:*

*Off-site fabrication* of steel panels and ferrocement components were used to reduce construction time, insure quality and reduce production waste.

### *Innovative Design:*

*Building Information Modeling (BIM)* was used to insure efficient coordination between design, fabrication and erection. A 3D model of the building was constructed using Revit platform and was then used for production of workshop drawings.



### *Innovative Fabrication:*

Cold formed steel wall and floor panels were pre-assembled in the factory and transported to site ready for erection. This technique insured best product quality, minimum material waste, and speed of erection.



**Panel Assembly at Factory**



**Fabricated Panels**

***Innovative Erection:***



**Assembled Panels at site  
(Entire Floor steel on ONE Truck)**



**First Floor Steel Erected in THREE DAYS**



**Erection of Ferrocement Slabs and Walls**



**Second Floor Steel Completed**



**Integration of Services within Walls and Floors during Erection**



***Innovative Function***



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