



TArc

TAYLOR ARCHITECTS

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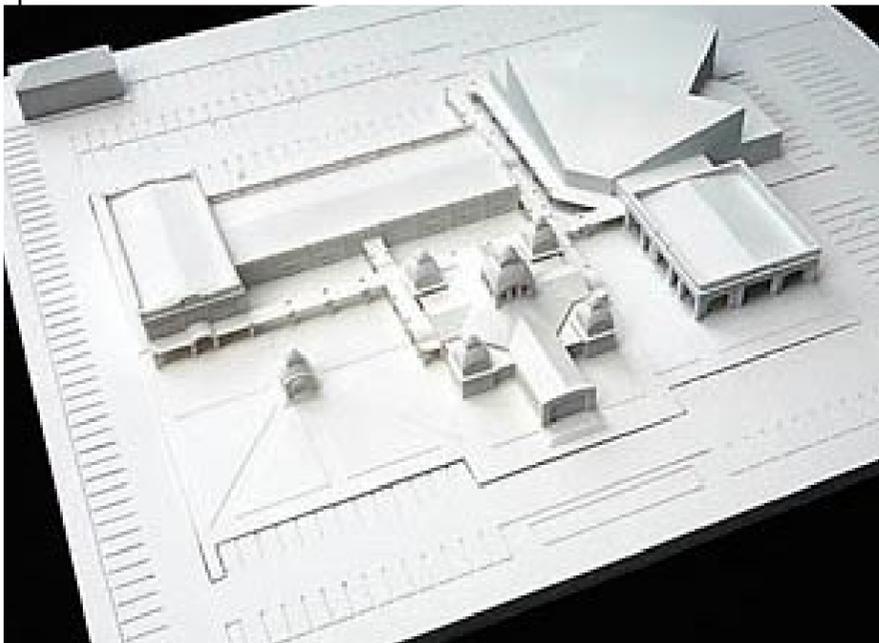
3-D PRINTING

The newest tool in the Architect's toolbox is the 3D printer. 3D printing is a phrase used to describe the process of creating three dimensional objects from a digital file using a materials printer in a manner similar to printing images on paper. The term is most closely associated with model manufacturing technology, where a building or site model is created by laying down successive layers of material.

Since 2003 there has been large growth in the sale of 3D printers. Additionally, the cost of 3D printers has gone down. The technology also finds use in the fields of industrial design, engineering, medical, construction, automotive, aerospace, and many others.

The most common method consists of an inkjet printing system. The printer creates the model one layer at a time by spreading a layer of powder (plaster, or resins) and inkjet printing a binder in the cross-section of the part. The process is repeated until every layer is printed, producing a 3D model. Inkjet 3D printing is optimized for speed, low cost, and ease-of-use, making it suitable for visualizing during the conceptual stages of design through to construction documents.

The days of laboriously making "chip-board" models is a thing of the past.



Ink-Jet Printed 3-D Building Model

PROJECT HIGHLIGHT

DOWNING CENTER - WESTERN KENTUCKY UNIVERSITY

Since 1999, Jerry Taylor of TArc (and its' predecessor firm Taylor • Whitney Architects) has been involved in a continuing series of projects at the 180,000 SF Western Kentucky University Downing University Center. The Taylor Architects relationship with DUC began with a long range infrastructure master plan and building survey and has extended through several infrastructure projects including restroom renovations, lobby/atrium improvements and re-roofing.

Phase I of the DUC Renovation, completed in August 2003, was a \$3.0 million project to expand the existing food service facility. This project involved the development of a new facade strategy for the entire building as part of the expansion of the existing space into what was the building's wrap-around portico. Concurrent with the 14,240 SF Phase I Expansion, the food service contractor, ARAMARK, developed a \$2.0 million renovation and redevelopment of the existing 16,900 SF dining facility with TArc as their Architect.

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Original Downing University Center Facade



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PROJECT HIGHLIGHT CONTINUED



Main (West) Facade of the Downing University Center at Dusk

Phase I of the project was subjected to both a compressed design and construction schedule due to new campus meal policies. The project was constructed in only eleven weeks during the summer.

Completed in early 2006, DUC Phase 2 was a 32,000 SF annex addition to the Dero Downing University Center for the Student Success Center. This \$5.7 million facility was the second phase of a multi-phased renovation and expansion to the outdated 30 year old student center. In addition to the 32,000 SF annex, the work of this phase included new façades at the north end of both the east and west building elevations, partially enclosing the original open portico and matching the new facades of the Phase 1 project.

The new north annex houses the WKU Student Success Center and provides a home for the Academic Advising and Learning Center, the Career Services Center, and the Disability Services Center. The two story addition includes computer labs, offices, tutoring facilities, the careers library, interview rooms, classroom/ multi-use facilities.



New DUC East Entry from Centennial Mall

DOWNING UNIVERSITY CENTER

Following the Phase II Student Success Center, TWArc completed the renovation of the DUC Theater. This \$900,000 project was intended to give new life to this heavily used space. A new floor was constructed to allow for ADA compliant seating and access. The entire space was rejuvenated with new ceilings, flooring, seating, etc. Under scheduling constraints, the project was constructed during the 2010 summer break.

Phase III, the renovation of the remaining interior space, has been programmed by TWArc and is scheduled for construction pending funds.



New Patio on East Facade



New South Facade



Student Success Center on North End from Centennial Mall



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