

NEWSLETTER September 2009

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TOPIC OF THIS NEWSLETTER: Glass Stairs and Balustrades

### Concept

The governing idea behind using glass in any structure is to add transparency to the division between spaces. The light feeling of a glass stair allows the occupants to feel as if they are walking on air; it erases the boundary between structure and space.

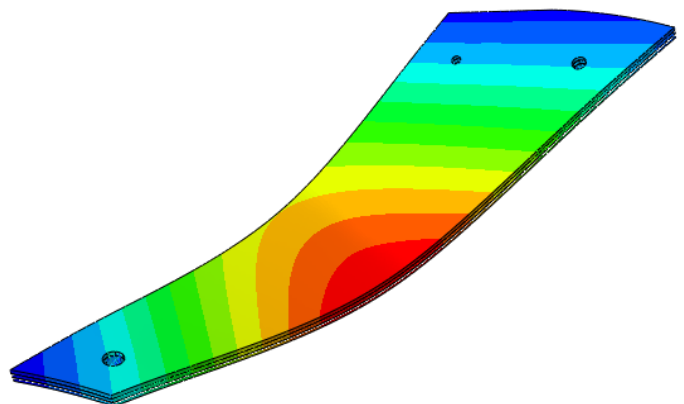
Using nontraditional tread shapes and creative supports, a well designed glass stair can stand alone in a room acting as a functional piece of art. The use of traditional building materials such as steel and wood with glass creates an interesting interaction between classic symbols of strength and transparency.

### Design Approach

At STUTZKI Engineering we pride ourselves in working with architects to ensure that their original intent is carried through to the final product. With an expansive knowledge of glass properties, code regulations, and connections we are able to achieve unique solutions to complicated problems. By appropriately putting to use many different materials and detailing concepts, we can achieve the most extraordinary of architectural design intents. Our highly technical and refined practice of engineering glass allows us to safely minimize glass thicknesses.



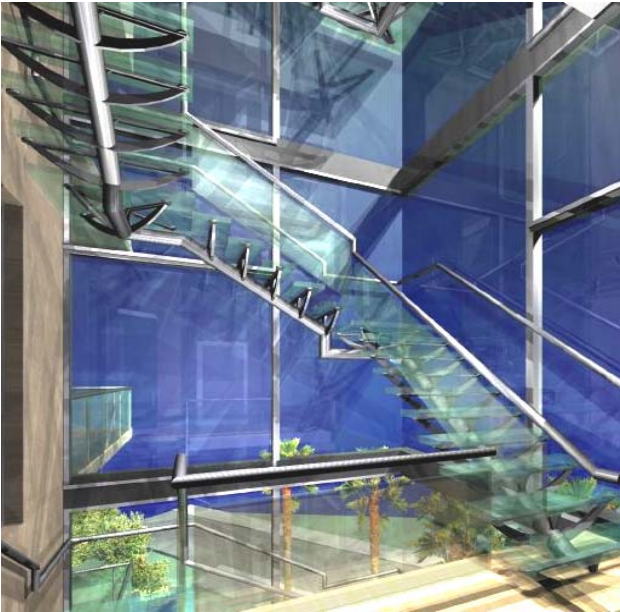
Glass Stair Case Under Construction



### Use of Finite Element Modeling to Examine Glass

With each glass stair project, we further develop our relationships with glass and ornamental structure fabricators to increase our combined repertoire of concepts and experience. This experience and network of partners make possible an expedited level of quality service. Based on research and professional

development our company is constantly involved in, we are able to quickly produce answers and lend a general understanding of the capabilities and limitations of glass products currently available.

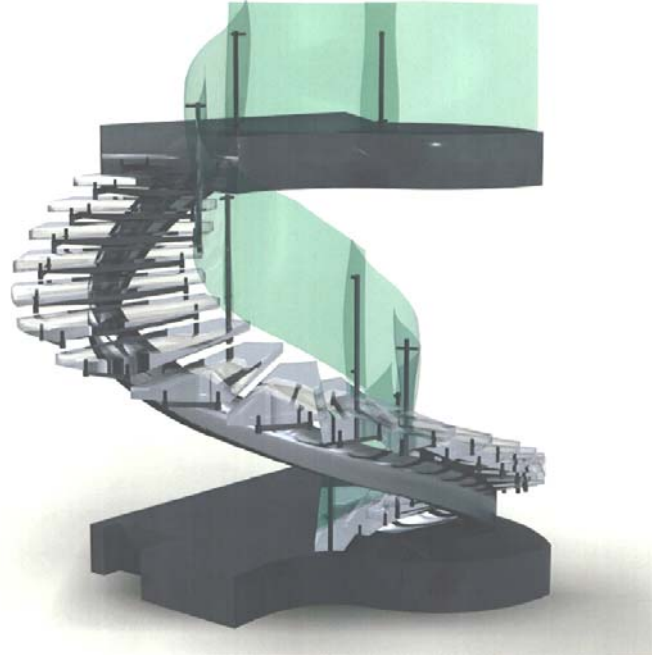


**Rendering of a Glass Stair and Balustrade System**

As shown in several of the figures included here, we are able to design glass features beyond just the tread system. Handrails and glass balustrades are design features often associated with glass stairs used to enhance and complement the system. Balustrades and handrails can pose substantial complications in need of delicate solutions. STUTZKI Engineering has a history of experience with long and short span, straight and curved glass balustrades that allow us to quickly make progress on such designs.



**Circular Glass Stair in Place**



**Model of a Residential Circular Glass Stair Being Designed**

All stairs pictured in this newsletter are either installed or under construction. Due to confidentiality agreements with the clients we cannot publish the names and locations. However, references are available upon request.

STUTZKI Engineering provides innovative solutions to Architects and Contractors. We specialize in the structural applications of glass products, cable structures, blast resistant design, and thermal analysis.

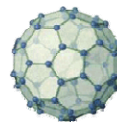
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For more information about STUTZKI Engineering please call 1-414-455-4815 or visit:

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