



Tensegrity Bridge, National Building Museum

by WilkinsonEyre

Proposed for the National Building Museum in Washington DC, this bridge will connect high level galleries on either side of the museum's main internal space (which lends itself well to large and distinctive sculptural forms). Developed in collaboration with Cecil Balmond, it is conceived both as a temporary link structure and as an exhibit in itself, interactively demonstrating structural behaviour in real time.

The bridge will be constructed from a network of glass tubes acting as compressive elements and joined together by cables in a 'tensegrity' structure. The underlying geometry is based on a series of tetrahedral cells, replicated numerous times to accumulate a visual mass capable of asserting itself within the extraordinary scale of the museum's courts while remaining essentially light. Load cells within the structure will detect variations in forces to activate a system of LED lights in the glass tubes together with sound emissions in response to visitors using the bridge.

Details

Location: Washington DC, USA

Client: National Building Museum, Washington DC

Architect: WilkinsonEyre

Structural Engineer: Arup

Span: 35m