



The Manhattan Project

A major art installation made possible by 3D Printing at Quickparts®

In early 2014 Sparks, a Brand Experience company talented at creating vibrant environments and activations, was tasked by Vick Art Advisors to create a sculpture to fill a 24-foot niche in a newly renovated corporate space in New York City. The client was looking for something to abstractly represent Manhattan but the deadlines were tight and thus demanding a quick turnaround.



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Sparks’ 3D design team started to brainstorm an art installation that evoked the feel of Manhattan in a unique interpretive way. The team thoroughly explored options on how this could be physically created. They researched CNC technology and hand fabrication, but found that 3D printing proved to be the most logical direction given the complexity of the subject. However, getting 3D prints made quickly was also a critical factor. They turned to the Quickparts on-demand 3D printing service from 3D Systems.

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A 3D digital file of the Manhattan district was purchased from Digimation Model Bank and used as a rough template in a 3D software product to rebuild a swath of the borough. Over ninety percent of the geometry was rebuilt to accommodate the 3D print medium. The entire CAD model was broken up into 15” x 15” segments which would be printed as 28 separate tiles, and any element that was deemed too fragile was re-proportioned. To allow another interpretive dimension, the concept also involved mapping a New York-related graphic image onto the whole piece. After testing a dozen images, the art advisor and the client selected a night-time skyline view of the City.





The project was not without its challenges. Considerable time was spent defining how the CAD software exported the data so it would work perfectly with the color jet printers. Another challenge involved engineering a way to permanently hang the 28 models onto a wall to create the expanse of Manhattan without fasteners being visible.

Since the tiles were numerous and time was tight, the team at Quickparts utilized its globally located service centers to get the project complete on time. Since the tiles were also quite large at 15 x 15 inches, the Quickparts team needed to use the ProJet 860 full-color 3D printers to create them. With 28 tiles, this meant that half of the work was completed in Quickparts' French facility and in Andover, MA, and then shipped overnight for mounting in the installation.

Said Shamlian, "The last models arrived from Quickparts on the Wednesday. All the pieces were prepped and pre-hung by Sparks craftsmen on Thursday. It was shipped to New York and installed to the delight of the client on Friday."

This project was a truly a challenging collaboration between the Sparks creative team, Vick Art Advisors, the creators of the original digital file, the client, and the experts at 3D Systems QuickParts. The result culminated in what is possibly the largest permanent 3D print array currently in existence.

