# Flying Carpet

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The FLYING CARPET is a piece of microarchitecture that converts a long, narrow volume of space in an elementary school into a reading, writing, lounging, and play space for the children occupants of the building. We created FLYING CARPET to provide resistance to the disciplinary trappings of traditional school furnishings. With this design we set out to give the young users a series of physical provocations about how the body could be configured while learning. Our site was a long, narrow band of space, 3' x 65', in a wide corridor. The most significant attribute of the site, apart from its high ceiling and excellent natural light, was the fact that this space existed outside of direct visual supervision by teachers in the adjacent classrooms. This meant the children would be free to actively create new modes of inhabitation and misuses of the designed forms. Toward this end we provided unconventional spaces for play and invention. We made a piece that consists of hybrids of slides and chairs, caves and tables, podiums and loungers all in the guise of conventional reading, writing, and tutoring places, in an effort to encourage our young clients to see these types of learning as overlapping, rather than segregated, by the educational institution. Folk stories in many cultures tell of a mythical flying carpet that transport their riders to distant places faster than the wind. Recalling these stories from our own childhood, the flying carpet became the apt poetic metaphor for the space's primary activities: reading, writing, and imagining… the fastest ways we know to travel elsewhere.

The design was generated using a computer script we wrote which enabled us to experiment with a wide range of sectional shapes. Once written, we then could input conditional statements to control the table, bench, lounge, and variable "bump" heights. Our early variations explored the use of double curved surfaces and alternative leg supports.

The final design responds to particular site conditions and utilizes the curvature and "landing" of the surface for self-support in addition to steel legs which follow the same geometry of the surface.

Since we were also going to be the fabricators on the project we made a series of scale models to study and refine the geometry in greater detail, and also to understand the process of fabrication and assembly of the final full scale piece.

For ease of fabrication, transport, and assembly, the final design is divided into seven sections. The steel support legs also serve a secondary role of joining the sections to each other. Each section is broken down into smaller elements which overlap to create a stronger bonding surface. We developed cut sheets for CNC and Water-Jet cutting of both the wood and steel elements. It's important to note that these were output directly from a 3D model to cutting files – no construction documents were made for the project. After CNC machining, elements are laid out in order prior to assembly. Sections are glued and clamped in stages.

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The computer script we wrote to generate the final form for the piece had to be able to produce widely varying sectional shapes, but also had to conform precisely to children's body dimensions. Once written, we then could input conditional statements to control the table, bench, lounge, and variable "bump" heights. Our early variations explored the use of double curved surfaces and alternative leg supports.

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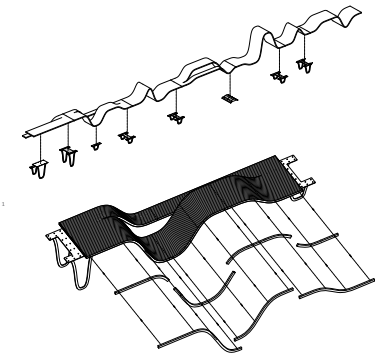
1. For ease of fabrication, transport, and assembly, the final design is divided into seven sections. The steel support legs also serve a secondary role of joining the sections to each other. 2. Each section is broken down into smaller elements which overlap to create a stronger bonding surface. Dowel holes are drilled in each part to facilitate alignment and rapid assembly. We developed cut sheets for CNC and Water-Jet cutting of both the wood and steel elements. It's important to note that these were output directly from a 3D model to cutting files – no construction documents were made for the project. 3. After CNC machining, elements are laid out in order prior to assembly. Sections are glued and clamped in stages.



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