The wall system that we designed is meant to be an operable system that allows the facade to slip in and out creating new configurations on the interior. This connection between the exterior system and the interior system are crucial to the design. Based on this objective we set about developing our joint. The joint has 5 fastener points, 4 for brackets in the x and y axis and 1 for the adjustable facade fastener in the z axis.

The reconfigurability of the wall system led us to explore the idea of a facade that changes opacity based on a screening system which serves as the main cladding for the facade. This cladding provides more or less privacy + protection from the elements based on the decisions of the building inhabitants.
The design model was a sketch of the basic concept for the wall design. It was one of many different sketches and was a great learning tool. It allowed me to explore some of the basic concepts of the 3d model while also imagining how the materialization of the system might take place. We used the CAD files that were generated from this Rhino model to build our first prototype.

**DESIGN MODEL**

Below: Elevation of System - Rhino

Below: Cut Sheet - Rhino
The prototype shown here allowed us to identify potential problems and to improve the functionality of the joints. Once some slight adjustments were made based on structural issues and configurability we moved on to the facade extensions. These extensions caused us to believe that another joint would be necessary, this joint will be presented in the final project.
During our design process we implemented a series of facade studies to imagine different ways to vary the opacity of our wall system. We tried out 6 variations during this initial study. In subsequent studies we will vary materials and scripts to adjust for the desired transmittance of light and views.
FACADE STUDIES

Left: screen on light box

Below: Screens on light box

Below: Screens in elevation
The final waterjet wall system is very beautiful to behold. We are somewhat satisfied with the amount of built in functionality. We do intend on upgrading the joint, producing more screens and developing the roof connection detail. Once we have enhanced the joint we will then cut more pieces at a larger scale and begin to finalize the design. Overall we are happy with our progress, but have much more that we would like to accomplish before the end of the semester.