

School of Business

Structure

The School of Business is currently being built and the structure of the building was still exposed. This shows the structure of a campus building and the usual systems of these buildings. The main structural elements seen are made of steel. There are major beams, joists, columns, and studs. There are also some wooden studs used in the building construction. Most of the walls are made of concrete with steel bars inside. The steel bars help strengthen the concrete, especially when under tension. While concrete walls can take gravity loads, these concrete walls are for the facade and finish of the building. The steel structure inside is the actual structure that supports these loads.



This building will contain the same usual systems as other buildings across the campus. These usually include windows that are not opened and blinds that can shade the sun. The temperature and the air movement of these buildings usually include mechanical systems. These buildings could have more useful sun shading systems and more natural air systems.

The structure of this building, and probably others around campus, are very rectangular and on a geometric grid. This building for example does not include any bracing. The overall structure is very simple. While using a more high tech structure may cost more, the effect on the environment could be limited. Less steel or concrete could be used, making the building more sustainable.



The steel joists used take the shape of a pratt truss. The commonly used steel I beam or wide flange beam are the largest support beams. This building uses these large beams and steel columns to form a more rigid structure. This helps with the lateral loads and the wind load. Even though it is not visible in the pictures, I believe the building's foundation includes a concrete slab and concrete footings. This would support the entire building and create a deep enough foundation.

