BRYAN
PAGAN

ARCHITECTURAL

PORT-FOLIO

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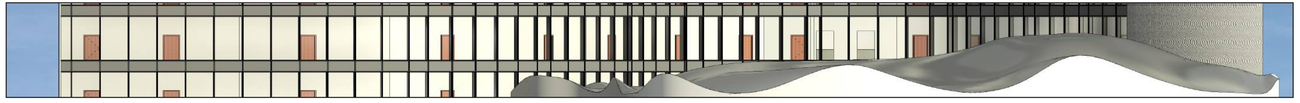
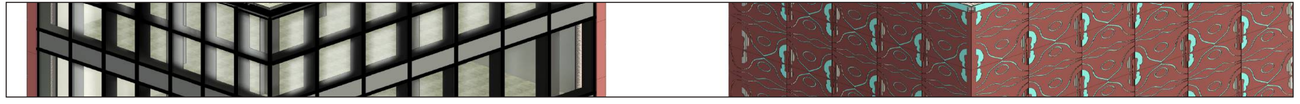
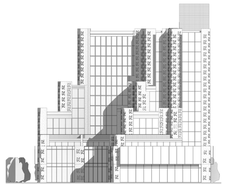




1 JOHN STREET

This project involves a team of two designers working on a mixed-use commercial building. One designer focused on the building's design aspect, while the other worked on its structural engineering. To determine the energy cost of the building's facade, an energy analysis was conducted based on the sun's path and the window-to-wall ratio. The amount of sunlight entering the building was calculated to estimate the energy expense of the facade. Two facade systems were considered: a precast concrete wall system with glass blocks inserted in the wall and a double facade curtain wall system. Detailed drawings were made , including parapet details, wall details, slab details, sill details, and plan details, to demonstrate how these facades worked structurally.

WEST ELEVATION



SOUTH ELEVATION

1

Energy Analysis

ENERGY ANALYSIS
TOTAL SQFT X ENERGY COST MEAN

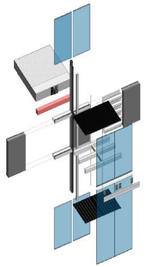
BASELINE
WINDOW TO WALL RATIO
80% GLAZING TO ALL FACADE SURFACES
67, 278 SQFT X 1.52 USD= $102,262.56

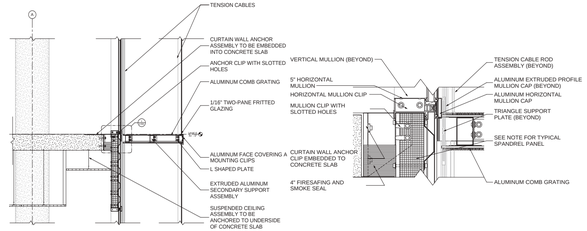
BENCHMARK
WINDOW TO WALL RATIO
VARIABLE AS PER ENERGY ANALYSIS VALUES:

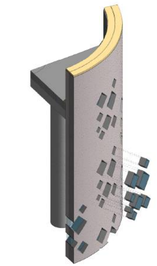
NORTHERN WALL: 60%
SOUTHERN WALL: 65%
EASTERN WALL: 55%
WESTERN WALL: 50%

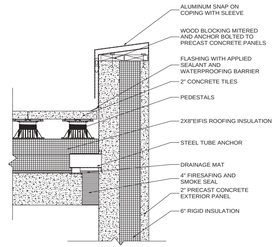
67, 278 SQFT X 1.49 USD/SQFT= $100,244.22

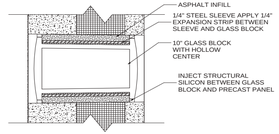
CONCLUSION
AS PER ENERGY ANALYSIS, IT CAN BE CONLUDED THAT, THERE WILL BE A DECREASE OF $2,018.34 PER SQUARE FOOTAGE ON ENERGY EXPENSE AT THE FACADE.

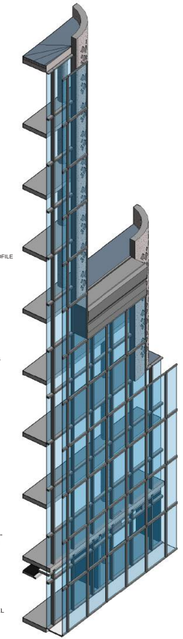


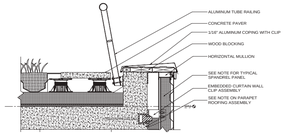


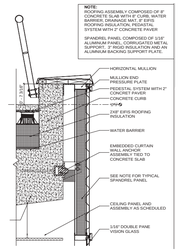


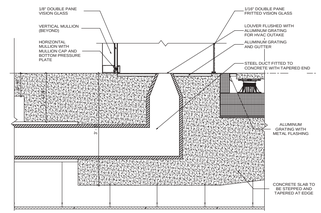


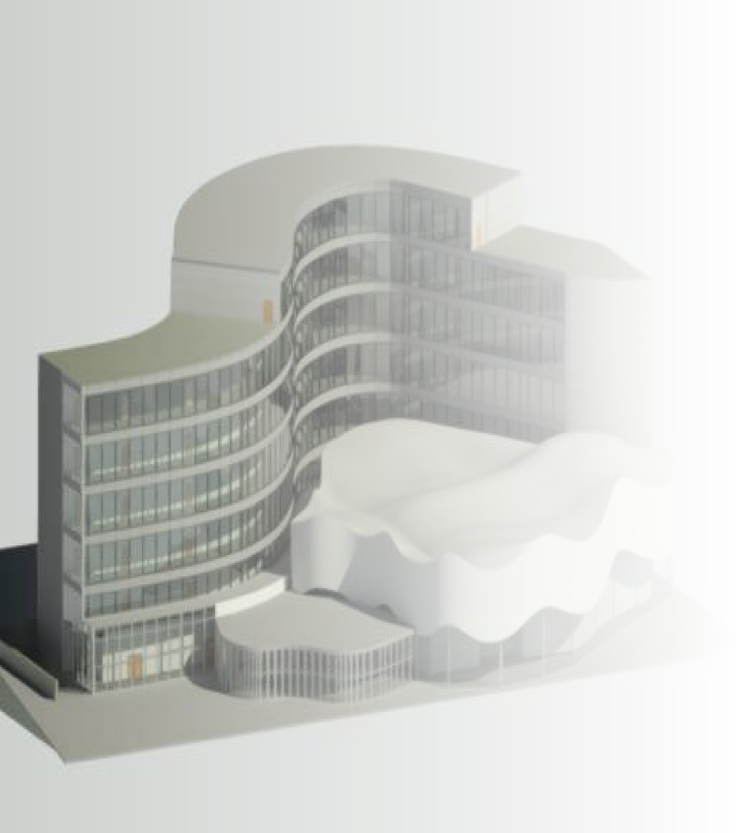








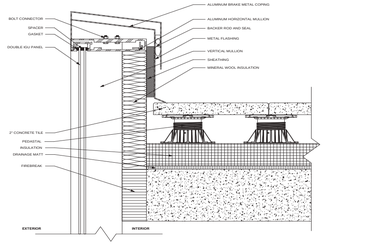


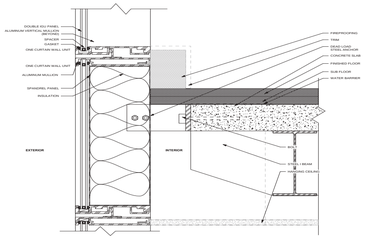


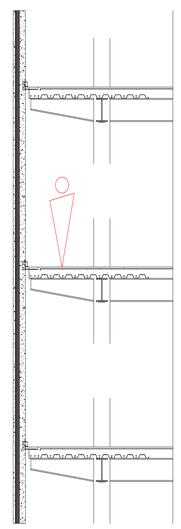
SERPENTINE TOWER/ SERPENTHEATRE

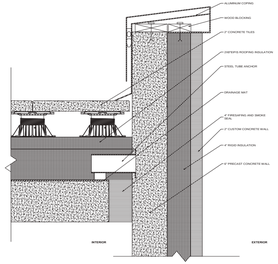
This design is for a mixed-use building that includes a residential building and an amphitheater. The concept of the design is inspired by the movements of a snake and a roller coaster. The flow and movement within the building influenced the design of the structural facade and the structural design of the amphitheater. Three facade systems were considered: a precast concrete wall system, a concrete panel system, and a typical curtain wall system. The concrete systems were chosen to reflect the concept and design pattern of a snake. Detailed drawings were made, including parapet details, slab section details, sill details, and plan details. The amphitheater is still in development, but for now, the facade consists of a storefront system and precast concrete pavilion wave.

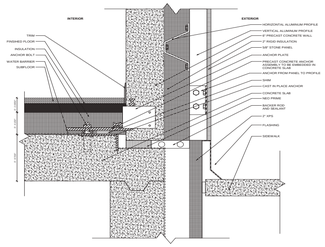
2







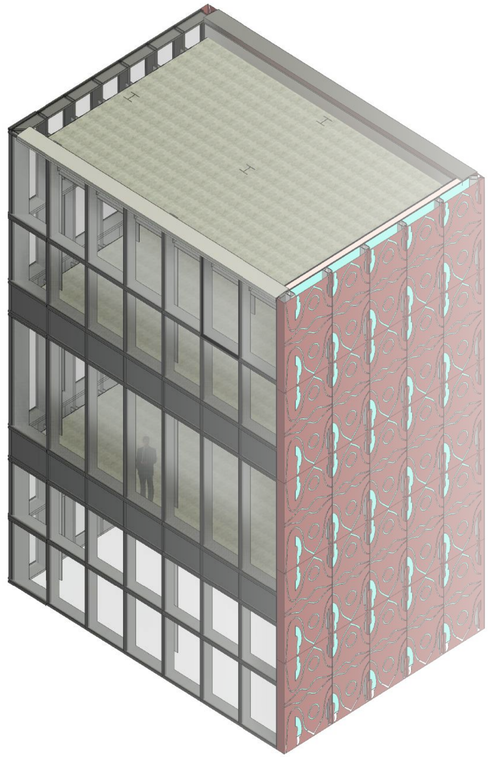




SOUTH ELEVATION

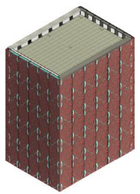
EAST ELEVATION

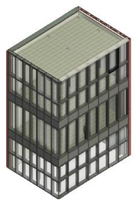
NORTH ELEVATION



FACADE STUDIES

This project is focused on designing a commercial building with two different facade wall systems - an opaque wall cladding system and a curtain wall system. The main objective of this project is to explore how different facade systems can work together, and how they structurally function. Detailed drawings were created, including parapet details, slab section details, wall details, sill details, plan details, and corner condition details.





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