

# The Visionary

Alex Plumb, Lingjing Shi, Firas Al-bar, Abigail Weaver, Ben Halee,  
Leonardo Coll, Kevin Hidalgo

Dr. Matthew Trussoni, Dr. Helena Solo-Gabriele, Dr. Samir Elmir, Dr. Esber Andiroglu  
Department of Civil, Architectural, Environmental Engineering



## Abstract

At Canes Engineering Associates, our vision for the Merrick Park site development is to revolutionize the area into a mixed use urban center that embraces the values and precedents set by its surrounding area through innovative design and sustainable engineering practices.

## Introduction

Our team's primary goal in The Visionary's development was sustainability. Through our project integration strategy, we were able to implement a plethora of sustainable features within the building in coordination across all professions.

### Sustainable Design Features:

#### Civil Water/EV Collaboration:

- Recycled AC Condensate/Rainwater Harvesting System
- Stormwater Reuse & Treatment System
- Semi-Intensive Green Roof

#### Civil/EV Collaboration:

- CycleSafe Bike Racks
- Solar-Powered Rectangular Rapid Flash Beacon
- No parking footprint
  - Provide discounts to customers who use alt. transportation

#### Structural/EV Collaboration:

- Semi-Intensive Green Roof
- Recycled Steel Rebar
- Bamboo/Recycled Steel Mullions on 3rd Floor
- 2-Way Structural System: Waffle Slab

#### Architecture/EV Collaboration:

- Electrochromic Glass
  - (2nd and 3rd floor of South, East, West Elevations)
- High-first floor elevation
- VOC-free Building Materials and Fixtures
  - Titanium Dioxide coated precast concrete



#### MEP/EV Collaboration:

- Solar Pergolas on Roof
- Solar Panels on 3rd Floor Awning
- Datapine Dashboard - SMART System
  - Monitor lighting, temperature, air quality, etc.
- LED Lighting
- Solar powered water pump servicing rainwater reuse system

## Design

The Visionary serves as a mixed-use commercial building at 351 San Lorenzo Avenue in Coral Gables, FL. The bottom two floors are a bookstore/reading room and third floor is a shared office space and the roof is a community garden.

- Arched Entrance
- Green Roof
- LED Lighting
- Waffle Slab
- Rainwater Cistern
- VRF System
- Circular Central Staircase
- Bike Racks
- Non-Potable Water Reuse



## Conclusion

The Visionary will be a LEED Gold mixed-use commercial building that will promote social, economic and environmental sustainability through the design precedents of modern engineering. It will become a community center for the Merrick Park area, allowing all citizens to freely interact, relax, and experience what the next generation of building construction can achieve. The Visionary resembles innovation, sustainability, and design excellence, a perfect culmination of the building technology goals for the future.

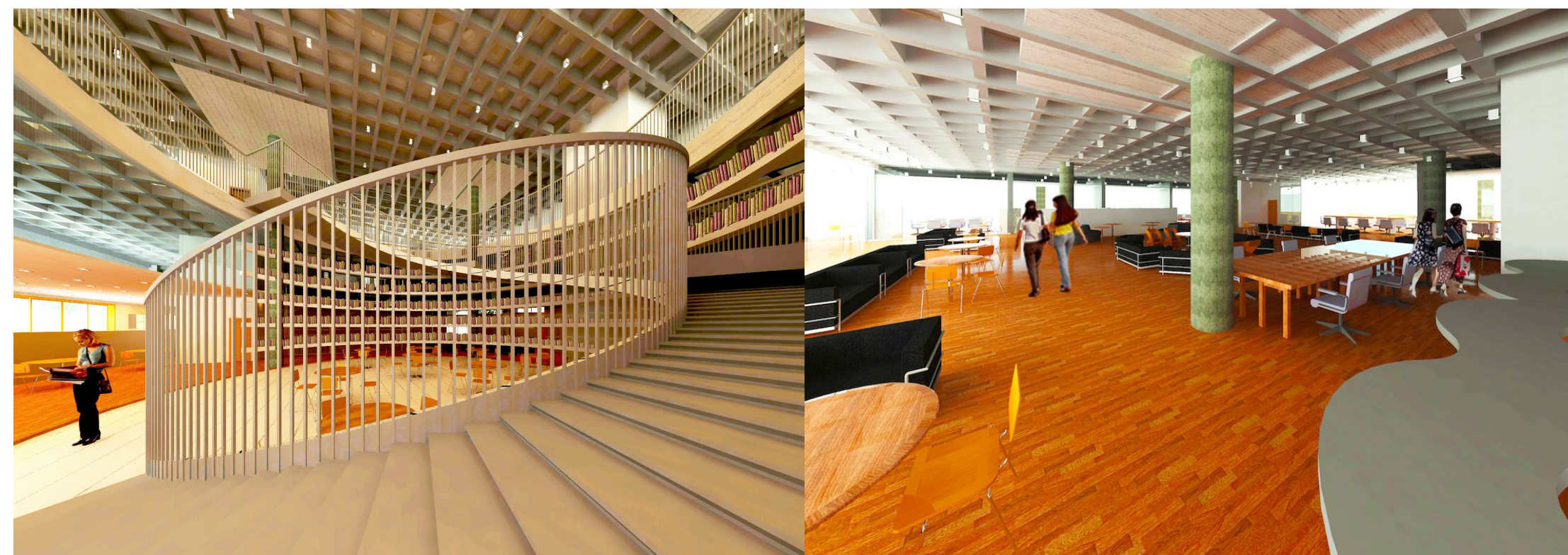


### The Visionary's Financials

The Visionary	Pre COVID-19	Post COVID-19
Project Cost *	\$ 13,200,000.00	\$ 13,180,000.00
Net Operating Income **	\$ 1,100,000.00	\$ 700,000.00
CAP Rate ***	8.33 %	5.67 %

Post COVID-19 Models \$20,000.00 Marketing Budget Reduction, 30% Reduction in Rent Sales and 30% increase in vacancy.  
\*Includes Land acquisition cost of \$ 2,766,500.00, Soft Cost of \$ 540,000.00, Hard Cost of \$ 9,387,000.00, 4% Developer Fee of \$ 508,000.00  
\*\*Yearly Net Operating Income Based on Average Coral Gables Office and Retail Rent and Vacancy.  
\*\*\* Net Operating Income/Project Cost  
Disclaimer : Models use conservative scenarios to exemplify how solid and safe an investment The Visionary is. CAP Rates can increase substantially.

## Results



## Acknowledgments

Canes Engineering Associates would like to thank all professors, guest lecturers, and the IAB for their time and guidance throughout the year.

