



# HVAC Design Internship

## Cici Legarde, Mechanical Engineering, 2023

Professional  
Development

### SUMMARY

*I've been a mechanical engineering design intern with Barker & Associates, Inc. for nearly eight months now. B&A is a small consulting engineering firm based here in San Antonio, and they primarily provide Mechanical, Electrical, and Plumbing (MEP) design services. I joined them in hopes of gaining a deeper understanding of what career options were available in the field, and they've been generous enough to provide me the opportunity to learn alongside their team and contribute to their design work. With B&A, I've played a role in over 30 separate building designs in over 10 different cities. My work includes running heat load and ventilation calculations, equipment sizing, and ductwork design.*



### SPICES

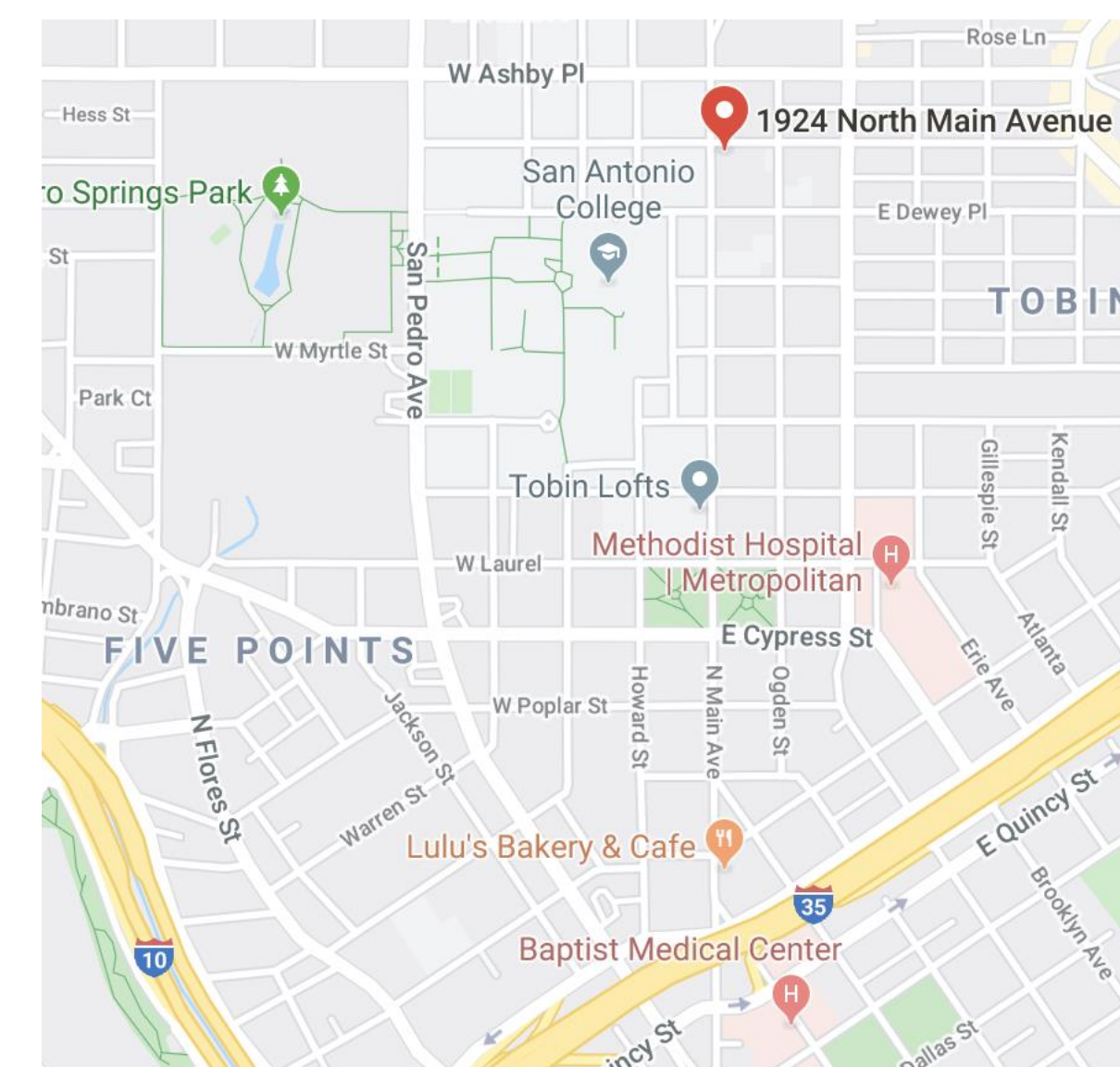
This internship provided me the experience of work in the field in which I plan to pursue my career. I was able to contribute to the work of my mentors through designing air conditioning pathways and running heat load calculations

### HERBS

I was able to create a comfortable living space with my mentors through HVAC. This not only solves the issue benevolently, but it also addresses it in a legal and binding way that holds a degree of honor when the seal is signed on the finished document.

### LEARNING OUTCOMES

At the internship, there was rarely ever JUST one project going on at a time, and I was required to attend project meetings in order to follow the timelines of each of our 30+ projects. I was also encouraged to ask questions whenever I needed guidance, and I believe this open line of communication made me into a more efficient intern, since I would know exactly what I needed to do. I was never given a project to do entirely by myself, but rather tasks that I should complete individually to contribute to the team's larger projects.



### IMPACT

*Not very many people know how HVAC systems operate, but I've come to understand that the main idea is to create a comfortable temperature for what the room is used for. Learning from experts in the field is the best way to fully put into context the importance of their work. I used to look at a building and only see walls and a roof, but now I carry a curiosity for what types of HVAC units are used and whether the insulation affects the heat loads. I have a deeper understanding of how several factors can affect the comfort of a room, and I hope I can apply that in my future studies.*

### ADVICE

*If another student is considering interning with a MEP design firm, I'd advise them to ask as many questions as they need to firmly understand all the processes that go into the calculations. It's just as important to know where the numbers come from.*