

## EXECUTIVE SUMMARY

In every construction project there are many problematic areas that can be addressed and analyzed to help the project succeed. The Housing and Food Services Warehouse and Bakery expansion is like most projects and has several areas that need to be better analyzed. With extensive research performed in the Fall Semester, I found four analyses that focus on problematic features of The Housing and Food Services Warehouse and Bakery expansion. They are based on areas of schedule and cost reduction using SIPs, implementation of BIM, site safety and occupancy plan, and acquiring a LEED certification.

### ANALYSIS 1: SIP ANALYSIS

This analysis focuses on reducing the time to renovate the office space in the Housing and Food Services building. The area of investigation would be to see if implementing a SIP schedule to the renovation of the office space would accelerate the schedule and reduce office downtime.

### ANALYSIS 2: BIM UTILIZATION

This analysis focuses on the use of BIM to improve the project. BIM was not used at all on this project but could have been used to improve the project in several ways. BIM could have been used from the start to turn the original building drawings into electronic files. Having an electronic model of the HFS building could be used to show the problems with the as-built. The electronic model will also allow for the use of clash detection software. Both reasons explained above should help to greatly reduce the total amount of RFI's and ASI's. BIM has many more uses, but for this project I recommend implementing BIM at a small scale.

### ANALYSIS 3: INDOOR AIR QUALITY

Indoor Air Quality (IAQ) is an important design criteria in today's industry. It is especially important in a facility such as The Housing and Food Service Warehouse and Bakery. Analysis 3 focuses on determining the IAQ of the current system and determining an alternate system through a mechanical breadth. After completing the analysis it was determined that the current system fell somewhat short and a 100% outdoor air system was chosen.

### ANALYSIS 4: LEED CERTIFICATION

LEED Certification is the evaluation and qualification of a sustainable project. By taking measures to increase LEED credits, the Housing and Food Services Warehouse and Bakery expansion will benefit in terms of energy efficiency life cycle costs as well as building and user performance.