

Executive Summary

This report determined if the University Health Building could be relocated to Orlando, Florida. The determination of the cost, changes to the lateral system and foundation, and analysis of the building's envelope were carried out to answer the above statement.

The relocation of the UHB is feasible based on a scope of elements that were analyzed in this report. Other items such as availability of materials needed, and the cost associated with these changes would also need to be analyzed.

It was determined that the relocation of the building would require the addition of 7 new shear walls and modifications to the existing shear wall. The addition of the shear walls resulted in an increased cost to the building of \$118,694. The foundation of the building was also analyzed and determined to be inadequate. The foundation system would not only have to be changed in size but also in type. Caissons were used to carry the new load. It was determined that each of the shear walls would need two caissons, and the columns would each need one, resulting in a total of 63 new caissons. The cost of the foundations change from spread footing to caissons including caisson caps was determined to be \$570,954. This resulted in a total increase to the building's cost of \$689,648.

Lastly, a typical section of the building's envelope was checked to determine whether or not it would be able to perform in Orlando, Florida. After analyzing both the walls condensation point and R-value, it was determined that they will be able to perform without change. This is due to the metal panels that enclose the insulated middle portion of the wall.