

9.0 Completing the Picture

9.1 Introduction

To complete the big picture and adequately justify the thesis work that has been completed thus far, a final analysis will be run with the savings accrued from the construction of the new medical center. This will show where this savings money can be used and how it can be invested to gain a good return.

9.2 Brief Analysis

A fairly brief analysis will be used to complete this thesis. To adequately show these results two major assumptions must be applied. They are as follows:

- First cost savings from the new medical center can be applied to the development of the old facility.
- Annual energy costs will be estimated and linearly related to be used in the yearly cash flow. 1.5% growth assumed with facility growth.

The partially developed facility model, as chosen through previous analysis, will be used to show how the development could be enhanced with the construction savings from the new medical center. The same model was used; therefore, all assumptions made and numbers used apply except for the following savings.

- \$413,356 applied to the renovation cost from upfront cost savings of the minipile deep foundation system.
- \$334,683 applied to the renovation cost from upfront cost savings of the precast panel wall implementation.
- Annual energy costs from the precast panel wall implementation.

The following table, Table 9.1, shows a summary of the complete analysis that can be found in Appendix N.

Table 9.1: Partially Develop to Run w/ Savings Cash Flow Summary

PARTIALLY DEVELOP TO RUN W/ SAVINGS SUMMARY	
Sale Price @ 10 th year	\$74,264,614
Return on Investment	\$50,865,041
Internal Rate of Return	34%

Table 9.2, below, shows a comparison of the best development option, Partially Develop to Run (PDTR), versus the best development option with the construction savings, Partially Develop to Run with Savings (PDTRwS).

Table 9.2: Comparison Summary

COMPARISON		
	PDTR	PDTRwS
Sale Price @ 10 th year	\$74,264,614	\$74,264,614
Return on Investment	\$50,117,002	\$50,865,041
Internal Rate of Return	31%	34%

The most significant change is the IRR. It rises 3% over the period of analysis meaning the hospital will be generating more yearly income from this investment. The sale price stays the same because the capitalization rates did not change and the return on investment is up slightly.

9.3 Conclusion

This analysis shows that the costs savings from new medical center could be used in developing the old facility and yield a better return on the investment. Therefore, this cost savings would not only produce a direct cost savings for the project, it could be invested and grown into substantial cost savings.

Again, this analysis was done because it tied the whole report together. It is known that this may be an unrealistic analysis mainly because of the application of the annual costs. This will more than likely not be physical money, just less expenditures for the owner. However, it was interesting to show the results.