



Conclusion

As a development company, Brookfield Properties is seeking to construct a financially, aesthetically attractive office building that is at the forefront of the commercial office building market. 77 K Street must be a unique project that is enticing to a potential tenant. One such way of differentiating the project from other similar office buildings is to pursue LEED accreditation with a minimum accreditation level of certified.

This thesis report helped assess the feasibility of such a business decision. Is seeking accreditation a wise investment? Will it help make the building more attractive to a potential tenant? Will it cost more in the long run? What steps must be taken to go about earning accreditation? These questions and more were all addressed within the content of this thesis report.

The first analysis was a survey of industry representatives from the owner's side of the business. The research concluded that indeed LEED accreditation is seen as a worthwhile business venture and many projects are choosing to pursue such accreditation. Not only are LEED buildings reaping the benefits of improved occupant health and productivity, decreased energy dependence, and lower operating costs, LEED projects are moving off of the market faster than their non-accredited equivalent buildings. LEED accreditation is a strong marketing tool that many companies are pursuing. Some even have a corporate policy requiring all projects to pursue LEED accreditation.

Once it was established that accrediting 77 K Street was based on solid industry trends, the next question was how exactly to go about gaining LEED points in the most cost effective and environmentally beneficial manner. The first analysis of adding a green roof showed that indeed the owner would experience reduced energy loss through the roof of the structure. The additional cost of the green roof system may not necessarily be offset by the utility savings associated with the addition but the system would significantly contribute to the sustainable design that the project is seeking to achieve. It was also ruled that the scheduling and plenum implication of the redesign were not severe and could be overcome through prior planning and coordination amongst trades.

The glazing alternative analysis provided the project with a means of reducing solar transfer through the glazing system without adding significant cost to the project. The cost to benefit ratio for this design change was advantageous as the energy savings far outweighed the additional cost of the better performing glass. Higher initial material costs could be offset by utility savings from reduced cooling loads within only a matter of a few years.

Upon completion of the two design analyses, a potential LEED status analysis was performed. It was determined that the two changes could potentially bring the project to a total of 17 LEED points, only six shy of LEED Certified. With only minor changes to the project's scope and design, it is very reasonable to assume that the project could indeed achieve accreditation with only limited impacts to the project's cost and schedule. This report provided a means for assessing how incorporating only a limited number of design changes could significantly impact the 77 K Street project's potential for achieving LEED accreditation.