

Report of the Green Building Design Task Group September 2007

Executive Summary

Background

The Green Building Design Task Group was formed under the auspices of the Somerset County Business Partnership. During fall 2006, Michael Kerwin presented a program to the Somerset County Business Partnership Executive Committee extolling the benefits of Green Building design in fostering energy efficient and high performance buildings. The Executive Committee discussed the concept of encouraging the adoption of green building design concepts for county, municipal and educational facilities as a means of providing long-term savings to Somerset County taxpayers while encouraging high productivity by employees working within the buildings.

The Executive Committee approved the creation of a program to promote the adoption of a policy for use in the design and construction of new public facilities in Somerset County. The Business Partnership was successful in quickly receiving significant financial support from Johnson & Johnson, HSBC and AT&T. These resources provided the financial wherewithal for the Partnership to enter into a collaboration agreement with the New Jersey Institute of Technology's Center for Architecture and Building Science Research. By entering into this collaboration with NJIT, our task group was able to utilize the resources of a unique New Jersey resource, a "think tank" that was able to assist us in the creation of new policies to guide the Somerset County public sector on how to design and implement high performance buildings. This toolkit is the first of its kind in New Jersey, and possibly, anywhere else in the country. Consequently, we can take pride in creating this new set of public policy documents.

In the months since our task group was first charged with creating this new policy, the "green movement" has gone mainstream. Agencies throughout state government (New Jersey Department of Community Affairs, New Jersey Department of Environmental Protection, etc.) and major statewide organizations (New Jersey League of Municipalities, New Jersey Alliance for Action, etc.) have created "green" committees. The "green" movement covers a lot ground: carbon emissions and global warming, alternative energy use, development guidelines, and transportation, to name a few. Consequently, it is difficult for the public sector to understand what policies are appropriate for their consideration.

Rather than try to address sustainability issues as a whole (an impossible task), our committee decided at the outset to focus on a specific policy: how to create new high performance public buildings in Somerset County. Our rationale for this decision includes the following considerations: first, new buildings present the best opportunity to incorporate "green design" principles without the need to address existing building conditions; and second, we would be able to apply green design standards

already developed and clearly defined by the United States Green Building Council's Leadership in Environmental and Energy Design (LEED) program.

Program Goals

At the outset, we established two primary goals in developing Somerset County's program:

- To create new public buildings that generate taxpayer savings by reducing building operating costs and increasing user productivity, and
- To "demystify" the process of reviewing the design of a high performance building, such that Somerset County and its local municipalities would have a tool that planning and building departments could readily use for project implementation.

Since one of our primary goals was to reduce building operating costs, we decided at the outset not to simply require a building to obtain LEED certification, since that certification does not guarantee a building would achieve the kind of energy efficiency that we were seeking. Rather, the task group decided at the outset to utilize select LEED standards, and where appropriate enhance those standards that would contribute the most towards improved energy efficiency and enhanced user productivity.

Deliverables

In order to achieve these goals, the committee is presenting the Partnership with three separate deliverables:

Policy and Implementation Model: this document is intended to guide Somerset County public officials in adopting a green building program. It summarizes and describes the key concepts of a high performance building – the heart of our project since it describes the benefits to the community in adopting the program. This model lays out the public policy justifications for why the Somerset County public sector should embrace and implement the program. And, finally, the model describes specific steps to adopt and implement the program. A template ordinance is included to be used as a guide for municipalities.

Building Program Toolkit: this document is intended to guide local building code officials, municipal engineers, and administrators in implementing the program. This document is intended to provide basic information on high performance programs in order to avoid potential obstacles to future projects. The idea is to introduce local building officials to the most common materials and strategies used in the design of a high performance building so that the local officials will have some familiarity with this approach. Two case studies are included in this section to illustrate the feasibility of applying high performance principles in the "real world".

Program Requirements: this document is intended to serve as a summary of the *Somerset County High Performance Building Program's* performance goals. The document provides a useful resource to use in the application of the program to an actual building program.

Conclusion

In summary, the committee believes we have realized our goal of creating a program to promote the adoption of a policy for use in the design and construction of new facilities in Somerset County. We wish to emphasize, once again, that this type of program is the first of its kind, and, therefore, the Business Partnership can be proud of providing this service to our constituents, including the public at large.

In moving forward, we encourage the Executive Committee to endorse the *Somerset County High Performance Building Program* and work with us to promote the adoption and implementation of the program throughout Somerset County. With your endorsement, we anticipate presenting the program to the Somerset County Freeholders and every local municipality within Somerset County for their consideration. We also anticipate that our program will be considered for adoption by other counties, agencies and municipalities throughout New Jersey and we intend to use that opportunity to promote not only the merits of our program, but to brand Somerset County and the Business Partnership as leaders in the sustainability movement.

Next Steps

In addition to the need to promote the program, there are some additional steps to consider:

- Local building code officials have expressed the need for training in this area. We recommend that the Partnership consider sponsoring a series of meetings introducing the program to local officials.
- The committee believes that high performance principles contained in this program, while focusing on new construction, can be applied to renovation projects in most, if not all, cases.
- Our program can serve as a model for addressing similar broader sustainability issues in the future. The committee noted, for example, that the Green Building Council recently adopted LEED standards for neighborhood development. Considering the priority that Somerset County has given to the redevelopment of our older boroughs and brownfield sites, a future program would be helpful to give guidance to municipalities in this area.
- Finally, the committee notes the need for the county and municipalities to develop and adopt a more comprehensive sustainability plan that could be added as an element to the master plan. In our view, the master plan approach is the best way to develop strategies that are comprehensive, complimentary, reflect the unique characteristics of each community, and are the most cost effective means of improving the sustainability of our communities.

Acknowledgements

We are indebted to many people in making this program possible. Everyone who helped us along the way deserves our most sincere thanks for their commitment to this process in creating this significant advance in our County's knowledge and understanding of sustainable, cost efficient building design.

The Somerset County Business Partnership would like to express sincere appreciation to the organizations and individuals who contributed to the success of this project.

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