

Using Environmental Sustainability Criteria to Specify and Purchase Carpet and Other Building Materials

Executive Summary

This program introduced an innovative purchasing process to evaluate manufacturers of carpet, and select one carpet that is environmentally preferable and also complies with functional criteria. This program has new green building materials to the state purchasing system.

The program began as an innovative, pilot project to select carpet for the new North Carolina Museum of Natural Sciences. A solicitation document, requesting extensive information and explaining the evaluation criteria, was sent to a selected list of carpet vendors. Evaluation criteria for award of contract was based on a maximum score of 100 points.

Staff from the Division of Purchase and Contract, the State Construction Office, and the Museum of Natural Sciences Worked together to evaluate each answer in the proposals from carpet manufacturers. Points were assigned to each answer to questions in the solicitation document. Collins & Aikman Floor Coverings, Inc. received the most points and was awarded the contract.

Specifications and purchasing procedures for carpet and other building materials used in maintenance and renovation are traditionally based primarily on function, expected life, and lowest initial cost, and not environmental sustainability. To sustain the natural environment and improve the quality of the built environment, it is necessary to comply with higher standards.

Staff in the Division of Purchase and Contract and the State Construction Office are doing research on specifications for floor tile, ceiling tile, steel studs, and partition systems, in addition to paint that is already on contract. The Division of Pollution Prevention and Environmental Assistance, Department of Environment and Natural Resources are consulting on technical environmental issues.

When Specifications are developed, a group of green building materials will be competitively bid and put on the state purchasing system. Designers could then use these specifications as an additive alternate in construction projects. Procedures would assure that contractors could procure these materials for state projects. This procedure would preclude the coordination required with government furnished equipment. State agencies could also purchase these green materials for maintenance and renovation projects.

Cost-effectiveness of carpet and other building materials is determined by analyzing the life-cycle cost. When environmental sustainability is included in the analysis, another layer of complexity is added. Increased volume buying of green building materials will help to keep costs competitive.

Beneficiaries of the program are all state agencies, universities, local governments and school boards that are required to purchase certain products through the state purchasing system.

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Description of the Program

In October 1999, the N. C. Department of Administration began a pilot project to select and purchase carpet for the new N. C. Museum of Natural Sciences. Stewardship of the natural environment is one important idea on display in the new museum. Adequate funds were budgeted for the quality of carpet specified. However, quoted costs were lower than expected, so the *environmentally* preferable product was purchased at a reasonable price.

This pilot initiative continued to develop as carpet specifications were revised by the Division of Purchase and Contract. Market development specialists in the Division of Pollution Prevention and Environmental Assistance, Department of Environment and Natural Resources, consulted with the Division of Purchase and Contract on the carpet specifications.

The General Administration Office of the University of North Carolina System requested that the Department of Administration study the feasibility of expanding beyond carpet specifications.

The General Administration Office of the University of North Carolina System requested that the Department of Administration study the feasibility of expanding beyond carpet into other green building materials. A variety of green building materials would be competitively bid, put on state contract, and could be included in specifications as an additive alternate. Procedures would assure that contractors could procure these materials for state construction projects. This procedure would preclude the coordination complexities required with government furnished equipment.

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When specifications are developed, a group of green building materials will be competitively bid and put on the state purchasing system. Designers could then use these specifications as an additive alternate bid in construction projects. Procedures would assure that contractors could procure these materials for state projects. This procedure would preclude the coordination required with government and would naturally lower the cost.

As the program is expanded to include other building materials, input from other state agencies and designers of building projects is necessary. Sustainable building design requires some additional research and design services beyond conventional design. This innovative program will influence and inform the:

- Selection of green building materials for maintenance and minor renovation projects.
- Writing of specifications for renovation and new construction projects designed by architects and engineers.

Actual Savings in the Short and Long Term

Cost-effectiveness of carpet and other building materials is determined by analyzing the life-cycle cost. When environmental sustainability is included in the analysis, another layer of complexity is added. A full picture of a material's life cycle must be understood—resources used to make it, how it is manufactured, used, replaced and recycled or discarded.

The pilot project demonstrated that environmentally preferable carpet, meeting the functional needs of occupants, visitors and owner agencies, purchased at a reasonable, competitive price. Increased volume buying of green building materials will help lower costs in the future.

Benefits Realized by State Agencies and Citizens of North Carolina

Beneficiaries of the program are all state agencies, universities, local governments and school boards who are required to purchase certain products through the state purchasing system.

Capital projects coordinators and facility managers who are responsible for managing renovation and construction projects in state-owned facilities will benefit. All residents of North Carolina will benefit from sustainable building design.

A built environment designed to meet today's needs, support productivity, provide healthy, indoor environments of good quality should be planned, designed, funded and constructed. Sustainable buildings for the year 2000 and beyond, that are built of green materials and are low in operating and maintenance cost and energy efficient, will not adversely affect the natural environment, the home of our future generations.

Relevancy of use by other state, local and federal governments

The feasibility for use by other governments is excellent. The challenge is to work cooperatively across all departments, and be willing to change traditional purchasing procedures and specifications. Authority to implement the program in North Carolina came from an Executive Order by Gov. James B. Hunt, Jr. The solicitation document to carpet manufacturers included this statement from the Executive Order:

Award (of contract) consideration will include a strong emphasis on the Contractor's efforts and results in sustainability. Basis for award is initiatives Outlined in the Governor's Executive Order No. 156, which encourages Purchase and use environmentally preferable products. Demonstrations Of sustainable actions should include raw material acquisition, energy Usage, environmental management systems, water and wastewater Management, purchasing practices, and water effluent management, Solid and hazardous waste practices, and product stewardship activities, Such as post-consumer use, and after-the-sale actions.