Proposed "Green Building" Elements for 1705-1729 East Capitol Street, S.E.

Introduction

The Project will incorporate sustainable, green building practices to offer an opportunity to create environmentally-sound and resource-efficient buildings by using an integrated approach to design. Sustainability is about living and working in ways that meet and integrate existing environmental, economic and social needs without compromising the well-being of future generations. The transition to sustainable development benefits today's society and builds a more secure future for our children. The building will promote resource conservation; consider environmental impacts and waste minimization; create a healthy and comfortable environment; reduce operation and maintenance costs; and address issues such as access to public transportation and other community infrastructure systems. The entire life-cycle of the building and its components will be considered, as well as the economic and environmental impact and performance. The following is an outline of how the project intends to support five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

Sustainable Sites

- The site is located in a pedestrian friendly urban environment with multiple modes of public transportation.
- Secure, protected bicycle storage facilities will be provided to encourage non-vehicular travel.
- A storm water retention and quantity control system will be employed.
- Underground parking is being provided to eliminate the heat island effect caused by large expanses of paved parking lots.
- A "Cool Roof" will be installed to reduce the heat island effect caused by typical darker roof surfaces.

Water Efficiency

- Water use reduction will be achieved by using water efficient plumbing fixtures.

Energy & Atmosphere

- The building is oriented along its east-west axis to maximize solar benefits.
- Energy efficient double glazed, low-E windows will be used.
- High efficiency heating and air conditioning equipment will be used.
- The majority of ductwork will be run within the insulated space.
- Energy Star appliances will be provided as standard equipment.
- Energy Star lighting in public spaces will be installed.

Materials & Resources

- Facilities to promote the storage & collection of recyclables will be provided.
- Portions of the demolition debris will be recycled.
- Focus will be given in the selection of materials with recycled content. Concrete, brick, metal and carpet products with recycled content may be used.
- Regional materials will be used. For example, brick, a large component of this project, will come from a manufacturer within 500 miles.
- Rapidly renewable materials including engineered wood products will be specified.
- Advanced framing techniques will use engineered lumber products like floor and roof trusses.
- Resource efficient and long-lasting, fiber cement siding will be used.

Indoor Environmental Quality

- Low-Emitting Materials will be used. These materials include adhesives & sealants, paints & coatings, carpet systems, composite wood,
- Occupants will have access to operable windows in most cases to give them individual control of their environment.
- Individual heating and air conditioning controls will be provided in each unit.
- Permanent walk-off mats will be installed to control contaminants.
- The project will be designed for thermal mass. For example, 5/8-inch gypsum wall board will be used throughout for stiffness and acoustic benefits. The brick veneer's thermal mass will also decrease temperature swings and increase occupant comfort.

Innovation & Design Process

- A home owner education program will be created to describe the environmentally friendly components of the project and show them how they can contribute in meeting sustainable goals.