State of California’s Capitol Area East End Project, Block 225, CA Department of Education

The first phase of the Capitol Area East End Complex project consists of constructing a new 497,000 square foot building to house California’s Department of Education at a budgeted cost of approximately $70 million. Commissioning has been incorporated into the project to ensure adequate indoor air quality and energy efficiency, and to verify the proper function of the green building enhancement strategies. Ground was broken in April of 2000 and completion and occupancy is expected to occur in July 2002. Although this project is being constructed with a bridge design-build contract, prior to design completion the State sponsored a competition in which design-build teams submitted proposals on how to make the building design more energy-efficient and sustainable. Basic schematic and design development documents prepared by the State’s master architect were given to the competing design-build teams at the beginning of the competition. The teams then had an allotted amount of time to formulate “revised” designs and ideas on how to achieve a more “green” project.

The winning proposal for Block 225 included approximately 125 green building enhancements. These enhancements are intended to reduce energy consumption, improve indoor environmental and air quality in the final occupied building, utilize resource efficient materials and systems, and ultimately improve the building performance within the allocated construction budget. The green building enhancements included a building and indoor air quality commissioning plan for the remainder of the design process, the construction phase, and for one year post occupancy. The State’s goal for this competition was to end up with a building 30% more efficient than required by the 1998 California Title 24 baseline. The winning design team expects to achieve at least a 31% efficiency improvement.

Upon award, the winning “green” building architect, SMWM implemented the design/construction documents phase commissioning plan. Although the schematic design and the design development work had already begun prior to this award, the consultant was able to recommend changes that were incorporated into the final Construction Documents. Changes included supply ductwork locations using a raised floor that will reduce energy consumption and specifying traditional high-efficiency chillers rather than the originally specified absorption chillers based on life cycle cost analysis. SMWM is now in the process of selecting low and no-VOC “green” furnishings and finishes for the building and the interiors. SMWM and its sub-consultants are developing functional performance commissioning tests (multi-point air quality tests) for the building’s indoor space and mechanical systems to ensure that indoor air quality parameters will be met when the building is occupied.