Facility Planning & Control

**6 . ENERGY CONSERVATION ANALYSIS REQUIREMENTS AND SUSTAINABLE BUILDING STANDARDS**

**ENERGY CONSERVATION ANALYSIS**

Articles 7.1.3(4) and 7.1.4(3) of the "Louisiana Capital Improvements Projects Procedure Manual for Design and Construction," require that the Designer shall prepare an Energy Conservation Analysis for each project.

All new state owned buildings and all applicable alterations and repairs to state owned buildings (as defined in R.S. 40:1574(C), (D), (F) and (G))**\*** must be determined to meet the energy efficiency requirements of the state energy code (currently ASHRAE 90.1-2007). The Designer may use prescriptive means to make this determination or may use an approved computer program. Currently the approved program is COMCheck with ASHRAE 90.1-2007 selected as the code option. COMCheck may be downloaded from <http://sfm.dps.louisiana.gov/pr_energy.htm> on the web.

The Designer shall provide a report to the Project Manager with the Design Development Phase Submittal (and if appropriate, at other phases of the design) that shall include proof that the building meets or exceeds the above mentioned state energy code requirements in terms of the building envelope, lighting and mechanical equipment. The Designer shall include in his submittal either the pertinent completed forms or a computer printout from the program he used to determine that the building meets all energy efficiency requirements. In all cases, the Designer shall include (on 8 ½" x 11" sheets of paper) a schedule of materials and the pertinent values for those materials that he used in making this determination.

**SUSTAINABLE BUILDING STANDARDS**

R.S. 40:1730.49 defines a Major Facility Project as a state-funded new construction building project larger than five thousand gross square feet or a state-funded renovation project which involves more than fifty percent of the replacement value of the facility or a change in occupancy. A major facility project shall not mean a building, regardless of size, which does not have conditioned space as defined by Standard 90.1 of the American Society of Heating, Refrigerating, and Air Conditioning Engineers.

Furthermore, in accordance with RS 40:1730.49, each Major Facility Project must be designed and constructed to meet sustainable building standards. In order to achieve the required sustainable building standards, each major facility project shall be designed and constructed to earn at least 25 points as described on the FP&C Environmental Building Rating System Checklist which references ASHRAE Standard 189.1-2009. The total of 25 points must include at least 2 points from Section 6 – Water Use Efficiency and at least 6 points from Section 7 – Energy Efficiency. If any requirement of the FP&C Environmental Building Rating System Checklist and/or ASHRAE Standard 189.1 is found to be in conflict with any requirement found in the “Louisiana Capital Improvement Projects Procedure Manual for Design and Construction”, “Instructions to Designers”, or any other design or construction code or standard currently in use by Facility Planning and Control, that prior existing code or standard shall govern.

The Designer, as part of his basic services, shall design the project to meet the functional requirements of the Owner within the budget established for the project and with the most practical energy efficient design possible.

The Designer shall evaluate the following elements for the project, and shall provide a written report to the Owner with the Schematic Design Phase Submittal setting forth recommendations for the design of the facility that will result in a building that consumes a practical minimum amount of energy and indicating the methods or design features proposed to achieve compliance with the FP&C Environmental Building Rating System. The report shall be organized according to the FP&C Environmental Building Rating System Checklist format. Elements to be considered include the following:

**1.** Site Sustainability

**2.** Water Use Efficiency

**3.** Energy Efficiency

**4.** Indoor Environmental Quality

**5.** Impact on the Atmosphere, Materials, and Resources

**6.** Construction and Plans for Operation

At the time of the Schematic Design Phase Submittal, and also with the submittal for each subsequent design phase, the Designer shall include an up-to-date, completed FP&C Environmental Building Rating System Checklist.

The Designer shall provide a report to the Project Manager with the Construction Document Phase Submittal explaining which items in the plans and specifications correspond to each point indicated as earned on the FP&C Environmental Building Rating System Checklist.

**\**The pertinent Subsections of R.S. 40:1574 are reproduced below. Please note that for state owned buildings, Facility Planning and Control shall make judgments concerning energy conservation issues rather than the state fire marshal****.*

C. If within any twelve month period, alterations or repairs costing in excess of fifty percent of the then physical value of the building are made to an existing building, such building shall be made to conform to the requirements of the code for new construction.

D. Where an entire floor of a facility, building, or structure is substantially renovated, that floor shall be made to conform with requirements of the code for new construction to such extent as the state fire marshal may determine to be practicably feasible, provided however, and notwithstanding the provisions of R.S.40:1578.1(A), the board of review shall be the final authority on issues of practical feasibility.

E. Altered elements in existing facilities shall be made to conform to the requirements of the code for new construction to such extent as the state fire marshal may determine is practicably feasible, provided however, and notwithstanding the provisions of R.S. 40:1578.1(A), the board of review shall be the final authority on issues of practical feasibility.

F. The physical value of a building in Subsection C of this Section may be established by an appraisal not more than three years old, provided that said appraisal was performed by a certified appraiser, or by the tax assessor in the parish where the building is located.  In the absence of such an appraisal, the physical value of the building in Subsection C of this Section shall be established by the state fire marshal.

G. The cost of alterations or repairs in Subsection C of this Section may be established by an estimate signed by a licensed architect, by a licensed general contractor, or in the absence of either such licensed person, by the state fire marshal.