

**ARTICLE VII. ENERGY CONSERVATION IN DESIGN AND
CONSTRUCTION OF NEW AND RENOVATED TOWN BUILDINGS**

Sec. 5-121. Intent.

It is the intent of the Council to comply with the applicable provisions of G.S. Chapter 143, Article 3B, Energy Conservation In Public Facilities; and to ensure that buildings built or substantially renovated by the Town of Chapel Hill are built in the most environmentally sound way.

The Comprehensive Plan for the Town of Chapel Hill says that, "The Town shall encourage site planning, landscaping, and structure design which maximizes the potential for energy conservation by reducing the demand for artificial heating, cooling, ventilation and lighting, and facilitating the use of solar and other energy resources."

It is the intent of the Council to provide the citizens and employees of the Town of Chapel Hill with new and renovated buildings which will give the optimum comfort, ensure the durability of investments for the taxpayer, consider the health of building occupants and provide the greatest awareness possible of the environmental impacts of what we do.

(Ord. No. 97-5-12/O-4, 5-12-97)

Sec. 5-122. Energy conservation goals in building design.

Any buildings built with Town funds shall be designed to achieve a goal of using at least 30 per cent less energy than required by the North Carolina State Building Codes in effect as of February 1, 1997, as long as the estimated energy savings exceed the marginal cost of the energy saving features over the expected life of the building and subject to fiscal constraints established by the Council. In order to avoid increased cost of operation, care shall be taken to avoid complex systems that would require extensive technical training of personnel. Acceptable methods for energy use analysis can be found in Energy Efficient County Facilities For Wake County. A copy of this document is on file and available for loan from the Internal Services Division, Chapel Hill Public Works Department.

(Ord. No. 97-5-12/O-4, 5-12-97)

Sec. 5-123. Qualification of architects.

In order to be selected to design a Town building, an architect has to demonstrate that the architectural firm has previously designed a building using some or all of the techniques listed herein. The architect chosen for any building must incorporate the conditions of this article in the building design or show justification why not.

To help ensure compliance with this article, at least one (1) member of each architectural selection review panel shall be a recognized energy professional. The Citizens' Energy Task Force shall maintain a list, updated annually, of qualified volunteer energy professionals including of brief summary of their qualifications and experience. For projects where the estimated cost of architectural and engineering services is less than \$30,000, the manager is

authorized to select a panel member from the list. For projects where the estimated cost of architectural and engineering services is \$30,000 or more, the Manager shall solicit a nomination from the Citizen's Energy Task Force to identify the selection panel member.

The forgoing section does not apply to the selection of architects for the 2001 major renovation of the Hargraves Center and the AD Clark Pool.

(Ord. No. 97-5-12/O-4, 5-12-97; Ord. No. 2001-04-23/O-1, § 1)

Sec. 5-124. Energy performance monitoring and reporting.

For major construction projects or substantial renovations of existing buildings (construction costs of \$200,000 or more and/or architectural fees of \$30,000 or more) the Town shall require either the architect or the staff project manager to monitor the energy performance of the building and assist the staff in optimizing energy use of the building during the first year.

Twelve (12) months after completion of the project, the architect shall be required to prepare a written report on the performance of the building in relation to the requirements of this article and to present their report to the Council at a regularly scheduled business meeting. The Town Manager may either require these services of the architect or assign similar responsibilities to the staff project manager.

The Town Manager's annual report to Council will include a section reporting the energy consumption performance of each Town building.

(Ord. No. 97-5-12/O-4, 5-12-97)

Sec. 5-125. Use of energy efficient technologies in town buildings.

Energy saving features, including but not limited to the following, shall be considered for new Town buildings and major renovations of existing buildings. Design documents shall include an explanation of how the features listed below are incorporated into the design or, for those features not incorporated, an explanation of the financial or operational reasons why the feature was omitted from the design.

- (a) Solar orientation, with the long axis facing south;
- (b) Use of daylighting;
- (c) Use of appropriate glass for minimizing heating and cooling loads;
- (d) Insulation beyond minimum standards;
- (e) Use of renewable energy for heating and cooling;
- (f) Use of renewable energy for heating and swimming pools;
- (g) Use of water conservation measures including dual water systems if available;
- (h) Landscaping for summer cooling effect and for blocking winter winds;
- (i) Use of energy efficient motors;
- (j) Use of energy efficient lighting;
- (k) Use of energy management systems;
- (l) Parking areas designed to limit heat absorption;
- (m) Use of building materials and color to decrease cooling load;

(Ord. No. 97-5-12/O-4, 5-12-97)