

Topic: Green Buildings & Energy Efficiency
Resource Type: Regulations
State: North Carolina
Jurisdiction Type: Municipal
Municipality: Town of Chapel Hill
Year (*adopted, written, etc.*): Unknown
Community Type – applicable to: Suburban; Rural
Title: Town of Chapel Hill Energy Conservation in Design and Construction of New and Renovated Town Buildings
Document Last Updated in Database: February 10, 2016

Abstract

Chapel Hill, North Carolina passed an “Energy Conservation in Design and Construction of New and Renovated Town Buildings” ordinance to require the greening of public buildings. The ordinance makes it mandatory for new municipal buildings and additions greater than 5,000 square feet to achieve “Silver” level LEED certification. The ordinance also gives the Town Council authority to require buildings and additions smaller than 5,000 square feet to achieve LEED silver certification. The ordinance does not apply to retrofits or renovations of the Town’s existing buildings or to the construction or renovation of public housing units (though the Council “encourages the application of LEED principles for these projects”). The ordinance automatically adopts the current applicable version of the LEED rating system in existence at the time the relevant project is registered with the U.S. Green Building Council (USGBC).

Under the ordinance, Chapel Hill will carry out its commitment to this policy by assuring that town personnel who administer projects are fully understanding of green building principles and will encourage the selected design teams to maintain and employ these principles through every phase. Criteria for choosing designers, architects, construction managers, and consulting teams shall include demonstrated knowledge of green building practices in their specific fields, and as applicable, a familiarity and experience with life cycle cost analysis and LEED ratings.

In order to be selected to design a town building, project teams are required to include a LEED Accredited Professional (LEED AP) architect or engineer who is involved directly in the day-to-day management of the project. A waiver from the LEED silver requirement may be given if a LEED AP on the project team determines that the silver standard could not be met without increasing project costs by more than 7%.

Chapel Hill’s ordinance also contains robust energy provisions, going beyond what is required in the LEED rating systems. The ordinance charges a project’s architect or engineer with monitoring the energy performance of the building and assisting town staff in

optimizing the energy use of the building during its first year. A project's contract for design services must include a requirement to produce – as part of the construction documents - a commissioning plan that must include provisions for initial commissioning upon completion of construction and provisions for a commissioning evaluation to take place after the building has a 12-month utility billing history. This 12-month commissioning evaluation will include testing and evaluation of all energy-consuming building systems to verify that they are performing as designed, that all required operations and maintenance training has been completed, and that the building is being operated and maintained in accordance with the instruction of the designer and equipment manufacturers. The town manager may either require these commissioning services of the project architect or the project engineer. In addition, the town manager's annual report to council will include a section reporting the energy consumption performance of each new town building or town building addition required to comply with the provisions of this article.

Resource

CODE OF ORDINANCES – TOWN OF CHAPEL HILL, NORTH CAROLINA

Chapter V. Buildings and Building Regulations

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

§ 5-121 to § 5-127

§ 5-121. Intent.

The council's intent is to take steps so that buildings built or substantially renovated by the Town of Chapel Hill are constructed 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."

The council's intent is to provide the citizens and employees of the town with new and renovated buildings that will reduce the energy requirements of town buildings, 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.

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

Any new or expanded building constructed by and for the town and meeting the applicability criteria in section 5-123 shall employ the Leadership in Energy and Environmental Design (LEED) Green Building Rating System throughout their design, construction, and operation unless the town council determines that such certification is not in keeping with the use or purpose of the building or is otherwise inappropriate. The LEED Green Building Rating

System refers to the most recent version of the Leadership in Energy and Environmental Design (LEED) Commercial Green Building Rating System, or other related LEED Rating System, approved by the U.S. Green Building Council.

Each town building project which meets the applicability criteria of this ordinance shall achieve at least the LEED silver level of certification, unless the council grants a waiver based on waiver criteria specified in section 5-124 of this article.

The town shall refer to the most current applicable version of the LEED certification system in existence. After registering with the U.S. Green Building Council at the design stage of the project as is required, the town may adhere to that existing version until completion of the project, regardless of any new LEED version that may be released at a later time.

§ 5-123. Applicability.

This article applies to new buildings constructed by and for the town and additions to existing town buildings whenever the gross occupied area of the new building construction is equal to or greater than five thousand (5,000) square feet. The council may require new town buildings and building additions of less than five thousand (5,000) square feet of gross occupied area to be built to achieve LEED silver certification.

This article does not apply to projects involving the retrofit and renovation of the town's current buildings, or to the renovation of existing or construction of new public housing units. The council encourages the application of LEED principles for these projects.

§ 5-124. Waiver

At any time during the design and construction process the council may waive the LEED silver requirement based on a determination by a LEED professional on the project design team that the silver standard could not be met without adding more than seven (7) percent to the project costs.

§ 5-125. Qualification of architects.

Design and project management teams for buildings meeting the criteria of this ordinance shall include a LEED-accredited architect or engineer who is involved directly in the day-to-day management of the project.

The town will carry out its commitment on this policy by assuring that town personnel who administer projects are fully understanding of green building principles and will encourage the selected design teams to maintain and employ these principles through every phase. Criteria for choosing designers, architects, construction managers, and consulting teams shall include demonstrated knowledge of green building practices in their specific fields, and as applicable, a familiarity and experience with life cycle cost analysis and LEED ratings.

§ 5-126. Energy performance monitoring and reporting.

For new construction and building additions required to achieve LEED certification under this ordinance the town shall require either the project architect or engineer to monitor the energy performance of the building and assist the staff in optimizing energy use of the building during the first year.

The contract for project design services shall include the requirement to produce a commissioning plan as part of the construction documents. The commissioning plan shall include provisions for initial commissioning upon completion of the construction project and provisions for a commissioning evaluation to take place after the building has a twelve-month utility billing history. The twelve-month commissioning evaluation will include testing and evaluation of all energy consuming building systems to verify that they are performing as designed, that all required operations and maintenance training has been completed and that the building is being operated and maintained in accordance with the instruction of the designer and equipment manufacturers. The town manager may either require these commissioning services of the project architect or the project engineer.

The town manager's annual report to council will include a section reporting the energy consumption performance of each new town building or town building addition required to comply with the provisions of this article.

§ 5-127. Definitions.

Leadership in Energy and Environmental Design (LEED) Commercial Green Building Rating System. "LEED Green Building Rating System" means the most recent version of the Leadership in Energy and Environmental Design (LEED) Commercial Green Building Rating System, or other related LEED Rating System, approved by the U.S. Green Building Council.

LEED silver level of certification. The project must earn a predetermined number of points from a detailed checklist of environmental features to achieve a LEED silver or other rating as set by the U.S. Green Building Council.