

# Alternate Energy Sources

## ARCHITECTURAL DESIGN GUIDELINES FOR THE H-2 DISTRICT

It is the city's goal to create compatibility between energy efficiency and historic preservation goals. In the historic overlay districts it is important to ensure that alternate energy sources are addressed in ways that do not damage or diminish the historic character of the buildings, sites, or districts.

It is recommended that before any energy efficiency upgrades are made, a comprehensive energy audit is conducted to determine the building's current energy loss.

### IMPORTANT CONSIDERATIONS...

*In traditional neighborhoods and historic districts, a variety of energy-conserving site and building features illustrate the sensibility of an earlier era's understanding of climate and energy efficiency. Thoughtfully located shade trees buffer residences and sidewalks from the summer sun. Projecting porches and awnings provide shaded outdoor space and lessen the impact of harsh sunlight on the building's interior spaces. Operable windows and shutters allow occupants to control the introduction of breezes and sunlight within the buildings. An understanding of how such historic features enhance energy efficiency is critical to maximizing the energy efficiency of historic buildings.*

### GUIDELINES FOR PRESERVATION AND REHABILITATION

- **Recommended** actions or treatments are indicated by ✓.
- Actions or treatments **not recommended** are indicated by X.

#### General

✓ Retain and preserve the inherent energy-conserving features of historic buildings and their sites, including:

- shade tree canopies,
- porches,
- operable windows and transoms, and
- shutters and blinds.

The use of energy-efficient and energy-conserving materials is encouraged. But they should not compromise the historic integrity of the building or district.

✓ Increase thermal efficiency of historic buildings by observing traditional practices, such as weather-stripping and caulking, and by introducing appropriate energy-efficient features such as storm windows and doors. See *Windows and Doors*, pages 27 and 28, for additional direction and guidance.

✓ Replace deteriorated or missing wooden blinds and shutters with matching new units sized to fit the openings.

In the modest residential neighborhoods that make up the H-2 Historic Overlay District, solariums or conservatories were not historically found and are considered to be inappropriate.

### ALTERNATE ENERGY SOURCES: SOLAR COLLECTORS

✓ Solar appliances, such as solar panels, are difficult to incorporate into the historic elevations and should be located in areas that have the least negative impact upon the character of the building and the historic district.

X Solar collectors should not alter the existing profile the roof, or be highly visible, particularly from the front elevation of the building.

✓ Solar collectors should be mounted flush on rear accessory structures, or placed on the ground in an inconspicuous location.

✓ Freestanding solar collectors should be installed in a manner which preserves the character of the building and the district and should not be visible from the public street.

- √ Solar greenhouses should be placed on rear or unobtrusive locations.
- √ Metal frames of solar collectors should not be left bright, but painted to match existing trim.

#### ALTERNATE ENERGY SOURCES: WIND TURBINES

Wind turbines are subject to placement and height restrictions for principal and accessory structures, per the City of Roanoke Zoning Code.