

# Green Building Case Study

## Braker Pointe Commercial complex



The main objective of the Braker Pointe project, to be completed at the end of 2002, is to incorporate sustainable design features into a lease space building without negatively affecting the bottom line. Located near N. MoPac Expressway and Braker Lane, the commercial complex will also include a deli and dining facility, an outdoor multi-use area landscaped with native plants, and a parking garage incorporated into the building footprint. As part of retaining the identity of this unique site, the historical structures, including a stone cabin and log barn, were saved and may become usable space in the future.

### Green Building features in the project:

- A white membrane roof with 85% solar reflectivity was selected for solar rejection and to minimize cooling loads
- High efficiency mechanical systems were selected with a EER rating of 13.7
- Parking garage lighting is bi-level HID on occupancy sensor controls
- High efficiency 4-step water cooled dx units with VFD fans were installed
- High performance glazing was used throughout
- Translucent windows allow natural light into interior spaces through outer offices while maintaining privacy
- Daylight harvesting is used in all exterior zones, and a very high efficiency lighting system with centralized whole zone dimming control was installed
- Space was allocated within the design for recycling and maintenance associated with recycling
- Low VOC paints were utilized throughout to improve indoor air quality
- Rainwater is captured in a detention pool
- Incorporated low-maintenance site improvements and native landscaping including edible, food producing, and drought tolerant landscaping
- Sprayed-on cellulose fire protection was applied to the ceiling of the parking garage

An energy modeling tool used to estimate the total energy use difference between the "as built" building and a building built to energy code that has the same dimensions, orientation, and aspect ratio found that over 2.3 million kWh and over 700 summer peak kW were saved annually. The model also showed that CO<sub>2</sub> emissions were reduced by over 2 million pounds.

Throughout design and construction phases, an extensive commissioning process helped the developer maintain the integrity of the design by making sure materials and systems were installed properly, excess was recycled or removed according to the plan, and sustainability standards were met. Carr America, Braker Pointe's developer, has several commercial projects rated with the Green Building Commercial Program. This project received a 3 star rating.