

Building GREEN in Greensburg

Centera Bank



Courtesy of Joah Bussert, Greensburg GreenTown

After a category EF-5 tornado virtually leveled the entire town of Greensburg in 2007, the owners of Centera Bank were determined to rebuild green. Design plans were drawn up with optimal energy efficiency and sustainability in mind, in keeping with the goals of the City of Greensburg to rebuild green. Situated on a downtown corner lot across the street from the bank's former location, the new 4,000-square-foot building incorporates energy-efficient building principles required to achieve the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) certification.

ENERGY EFFICIENCY FEATURES

- A **high-efficiency air-cooled heat pump** split system harnesses the benefits of environmentally friendly R-410 refrigeration in both the heating and cooling mode to reduce the overall energy cost of the building
- A **well-insulated building envelope** is achieved through insulated concrete form exterior walls with an R-value of R-25 and 14-inch-thick foamed-in-place insulation between roof joists, optimizing energy performance
- **Highly reflective roofing material** minimizes cooling loads
- **Glazing on exterior windows and doors** reduces the need for winter heating and summer cooling
- **East/west building orientation** makes optimal use of daylighting
- **Light shelves on the south façade** block direct summer sunlight while enabling low sunlight to provide warmth and enhanced daylighting in winter months
- **Light emitting diode (LED) bollards** reduce the amount of electricity used for outdoor lighting.



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WATER EFFICIENCY

- **Low-flow plumbing fixtures** use 20% less water than those installed in a typical code-compliant building
- **Drainage bioswales collect** and retain storm water runoff from the roof and parking lot and allow natural percolation into the subsoil
- **Drought-tolerant landscape plants** help reduce water use in summer months
- A **water-efficient floor plan** groups bathrooms and other water-using spaces, reducing the time it takes hot water to flow to the point of demand.

SUSTAINABLE MATERIALS

- **Native vegetation** used for landscaping conserves water and reduces the need to use fertilizer and pesticides
- **Low-maintenance building materials and systems** increase materials longevity
- A physical **in-house recycling system** reduces on-site waste generation
- **Stay-in-place formwork** optimizes placement of concrete and minimizes use of materials
- **Engineered wood products** used in building construction avoid the use of large-dimension timbers.

AIR QUALITY AND INDOOR ENVIRONMENT

- An **open floor plan, high ceilings, large interior windows, and skylights** flood the interior with natural daylight and reduce the amount of electricity required for indoor lighting
- **Sensor-controlled, high-efficiency light fixtures** in the lobby and offices maximize the use of daylighting and avoid unnecessary lighting of unoccupied spaces.