

“We are excited to have been able to work with our residents and project team to transition Twin Oaks to an all-electric community as part of a mod rehab scope. This transition is a significant step towards reducing climate impact and providing a healthier environment for residents.”

Kirk Paisley,
President Architect, BDCL Architects



The Twin Oaks Apartments complex consists of seven buildings configured around a central community open space.

Enterprise Green Communities 2020 Criteria Twin Oaks Apartments in Ludowici, Georgia

Enterprise Green Communities, the standard for sustainable futures, is the only national green building program designed specifically for affordable housing construction. Green building practices lead to healthy, efficient, and environmentally responsible affordable homes, and promote equitable development by giving residents a voice in creating their communities.

CHALLENGE: REHABILITATE TO PROVIDE GREEN, HEALTHY, RESILIENT HOMES

- The Twin Oaks Apartments, serving families making 31-50% of the Area’s Median Income (AMI), is the only existing LIHTC property in rural Ludowici, Georgia, making it even more critical to preserve. Twin Oaks Apartments received a LIHTC award for a moderate rehabilitation and chose to pursue green certification through Enterprise Green Communities, qualifying for incentive points towards their LIHTC award as offered in Georgia’s QAP.
- Resilience and sustainability were the main areas of focus for this project and the developer, Pivotal Housing Partners (formerly MVAH Partners), sought to achieve them through:
 - Planning for and constructing against the area’s primary climate hazards (rain and wind).
 - Transitioning the property to all-electric, a substantial challenge for buildings with a moderate rehabilitation scope due to the extensive upgrading and planning needed.

APPROACH: CREATING ENERGY EFFICIENT, ALL-ELECTRIC UNITS

- As part of the transition to all-electric units, new heat pumps and electric ENERGY STAR appliances such as exhaust fans, fridges, and stoves were installed. Each unit was retrofitted with either new electric free-standing or drop-in ranges. When possible, existing wiring systems were re-used to reduce costs.
- Electric ranges eliminate the health risks of combustion products produced by burning natural gas (and methane from unburned gas). The new drop-in ranges also provide accessible controls.
- The transition included new insulated low-E vinyl windows, along with paneled insulated metal entry doors. These additions reduce energy demand and lower energy bills.
- Renovating an existing development rather than building new reduces embodied carbon associated with construction materials. Eliminating combustion equipment reduces future emissions, resulting in apartments that are more resilient to, and minimize the impact of, climate change.



”When changing the systems and appliances that residents will use – whether that’s a new type of thermostat or new induction stove –education and coordination will lead to better living conditions for all.”

Krista Egger

Vice president, Building Resilient Futures, Enterprise Community Partners

IMPLEMENTING RESILIENT STRATEGIES

- As the only affordable housing in Ludowici, it is especially critical for Twin Oaks Apartments to be resilient to climate vulnerabilities and continue to be functional for years to come. The building incorporated strategies to address the natural hazards identified in their Project Priorities Checklist (criterion 1.1) (rain and wind).
- The project team then used optional criterion 1.6 (Resilient Communities: Multi-Hazard/ Vulnerability Assessment) and compiled a list of strategies to reduce risks for residents. These strategies leveraged mandatory criteria such as 8.2 (Emergency Management Manual), 8.3 (Resident Manual), and 2.8 (Access to Transit) to implement emergency plans, including an evacuation plan.
- They also utilized 4.2 (Advanced Water Conserving Fixtures) as a strategy to implement low-flow/low-flush water fixtures which not only help conserve water use, but also reduce the strain on the area’s sewage system.

CREATING A FRAMEWORK FOR RESIDENT PREPAREDNESS

- Sustainable and resilient housing goes beyond structures and appliances; health and resident preparedness are also important elements. While the Emergency Management Manual (8.2) guided staff on how to execute evacuation plans and address incidents, the Resident Manual (8.3) supports residents with an emergency plan for specific climate events. A section on disasters identified safe gathering spaces and the appropriate action for each disaster scenario. Enterprise’s [Portfolio Protect Tool](#) can be used to identify natural hazard risks at all properties and offers recommendations and resources to minimize potential harm.
- Providing residents with emergency gathering spaces and direct instructions on actions to take during a disaster helps to empower residents, offering peace of mind and a path to more successful outcomes.

- **Enterprise Green Points:** 48 (min 35 required)
- **Project Type:** Moderate Rehabilitation
- **Construction Cost:** \$6,206,665
- **Year Completed:** 2022
- **AMI:** 7 buildings, 40 units, 1-3 bedrooms, all units 31%-50% AMI
- **Property Developer/Owner:** Justin Gregory, [Pivotal Housing Partners](#)
- **Architect/Green Building:** Kirk Paisley [BDCL Architects](#)

OPTIONAL GREEN COMMUNITIES CRITERIA ACHIEVED

1.6 Resilient Communities: Multi-Hazard Risk/Vulnerability Assessment	5.5b Moving to Zero Carbon: All Electric
2.7 Preservation of and Access to Open Space	7.6 Smoke-Free Policy
4.2 Advanced Water Conservation	7.7 Ventilation