



Energy Efficient Duplex

Lewisburg, Pennsylvania 2010
 Union County Housing Authority

Under its Energy Efficient Housing Program, the Union County Housing Authority retained OPA to develop designs for affordable housing that is highly energy efficient, document the process, and develop a collaborative approach to educational outreach with nearby Bucknell University. UCHA received a \$500,000 DCED grant to develop a demonstration project for energy-efficient, “green” new construction and retrofit housing. Modular construction is selected for its cost-efficiency, and very high quality. It’s very short construction duration is highly desirable in established neighborhoods. New, energy-efficient duplex houses reinforce existing community fabric by building in established neighborhoods on previously developed sites.



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The front garden serves multiple purposes towards the sustainable goals of the project, improving livability, and community engagement. Rain gardens capture rainwater runoff from the roof, allowing runoff to reenter the aquifer on the property. The garden plants are native or adapted. They require little maintenance and are resilient to drought or damp conditions. Though the design is contextual, the sun-collecting roof trellis, rain garden and recycled content siding announce the homes’ green status to the busy traffic on Market Street.

Many community resources are easily accessible to the residents. Sidewalks, front gardens and street-facing porches promote interaction and a sense of community. The houses are designed to be “visitable” by all people and adaptable to universal accessibility standards. As a model, the benefits of this modest project will multiply. Small scale infill houses are critical to the maintenance and character of mixed-income, mixed-use communities, particularly those that are located in sensitive architectural fabric.