

WHITELAND VILLAGE

Exton, PA



Building Statistics

Occupancy: Retirement Village

Size: 1,320,000 square feet

Cost: \$100-150 million

Construction: November 2006-November 2008

Delivery Method: Design-build



Structure

Precast concrete plank supported by steel beam floor system and CMU bearing wall

Masonry shear wall, steel moment frame, and steel braced frame lateral resistance systems

5" slab on grade with shallow spread footings

Cold-form steel trusses and overframing at residence roofs

HVAC

Energy wheel uses recycled energy to condition air before it enters the building

Chilled water cooling and gas hot water heating provided via a central distribution system

Fire Protection

Wet system throughout complex

Standpipes pressurized using 1000 GPM electric fire pump in residence buildings

No standpipes in commons building

Project Team

Owners: Whiteland Village, Roskamp Management Co., LLC

Architects: Dever Architects, HLM Design

Construction Manager: Paul Risk Associates, Inc.

Structural: Baker, Ingram & Associates

HVAC: Madsen, Inc.

Electrical: Meadow Valley Electric

Fire Protection: Marco, Inc.

Geotechnical: CVM Industries

Civil: Edward B. Walsh

Pool Design: Wade Associates

Architecture

3 residential buildings, commons, and healthcare facility

6 total stories, 5 above grade

Mansard roofs clad in fiberglass roof shingles on residences

Grass roof with water features on commons building

Manufactured stone and vinyl siding exterior barrier walls on all buildings

All condominiums have a balcony or porch

Basement level for underground parking below entire footprint



Electrical

208Y/120V service from (1) 5kV transformer

1000A distribution panel at each floor of residences

Individual panels in every condominium

Co-generation plant onsite, only on power grid during off-peak hours

Mary Longenecker

Structural Option—The Pennsylvania State University

<http://www.arche.psu.edu/thesis/eportfolio/2007/portfolios/MEL922>