Morgan Park Place
A Sustainable Building Pictorial Narrative

Project Overview

- **New construction: 72 unit multi-family, mixed use urban infill**
- **Historic Germantown, Nashville, TN**
- **Van Buren Street between 3rd and 5th Avenues North**
- **Phase One completed;**
- **Phase Two under construction**
- **100 % EarthCraft House certified**

Size range 750 to 2200 square feet
Price range $150,000 to $550,000

Developers / Builders:
Lawrence Bros., LLC and
New Urban Construction, LLC
707 Monroe Street, Nashville, TN

Architect: John Abernathy, DAAD Architects

Building Outside the Box
A Cumberland River Compact Program

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Streetscape Views

Mixture of Townhomes, Flats and Cottage Houses

Adjacent to Morgan Park green space and proposed Greenway

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Each unit is a unique, custom design with variable green building features. The following offers a brief review of the sustainability features that have been used extensively in MPP homes

Sustainability - Energy, Water & Waste Efficiency

- **Superior Insulation and Sealing of House Envelope**

Open Cell spray foam insulation for larger surface areas

Closed cell spray foam insulation to seal joints of house envelope

Blown in cellulose made from recycled blue jeans

Caulked and sealed building envelope – windows and wall studs

Construction waste recycling: 50-75 % of waste content kept out of landfills

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Pre-cast insulated concrete form (ICF) walls offer superior insulation and structural integrity.

Insulated Garage Doors

Advanced framing techniques like this ladder corner allow better insulation and save wood resources.

Triple Paned Windows

White roof surface reflects heat in summer to reduce cooling demand.

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- **Superior efficiency and sealing of HVAC Systems**

15-16 SEER, Two Phase, Variable Speed HVAC systems for superior efficiency. Units and duct work located inside conditioned space for added efficiency.

All duct work joints are carefully sealed with mastic to give less than 5% leakage, compared to typical system leakage of 20-30%.

Eight units have Variable Refrigerant Volume (VRV) systems for ultra quiet and ultra efficient heating and cooling.

Energy Recovery Ventilation (ERV) system to boost HVAC efficiency.

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- **All Energy Star Appliances and Low Flow Water Fixtures**

Energy Star dishwashers save both electricity and water.

Units are furnished with front loading Energy Star washing machines that use 40 % less water than top loaders.

Extensive use of fluorescent bulbs.

Tankless, on-demand natural gas water heaters save energy and water. They have lifespan of 25 years and provide up to 8.5 gallons per minute of continuous hot water.

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Sustainability - Resource Conservation and Durability

Renewable or durable material use:

- **Bamboo floors**
- **Steel rails**
- **Granite counter tops and vanities**
- **Ceramic tiles**

Air jet bath tubs hold no residual water between uses for better moisture control.

Trex composite wood decking, Steel trim railings, and Hardie Plank siding used for durability and wood saving properties.

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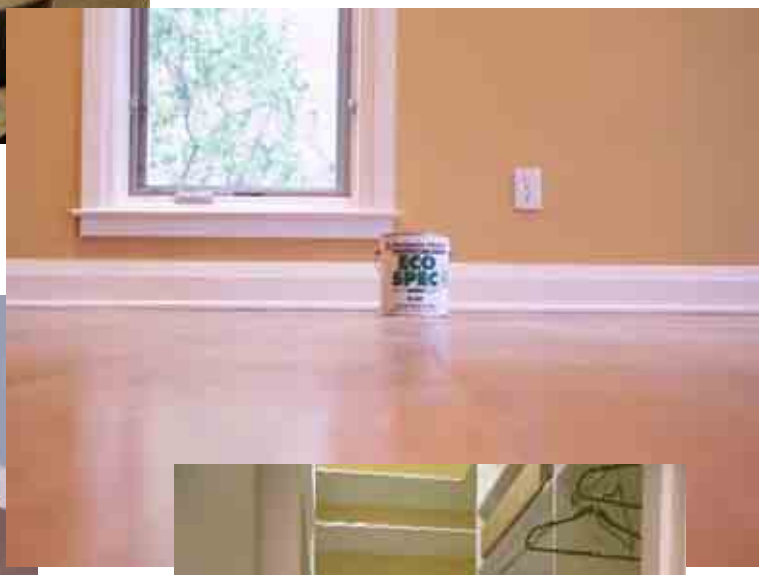
Sustainability – Indoor Air Quality

- Low VOC paint
- Low VOC carpet
- Cabinetry from MDF or solid wood only (no particle board)
- Direct vent fire place
- Ventilation with controlled and filtered fresh air intake to keep allergens out of the house



50 % Recycled Content, Low VOC carpet

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Sustainability – Landscape & Stormwater Management

Stormwater runoff is directed to pervious parking area with drainage into rain garden infiltration zone. Gravel filled utility trench behind rain garden offers additional infiltration for maior storm events.

Rain gardens constructed with infiltration layers from bottom up: Dirt, filter fabric, 2-3 ft gravel, filter fabric, dirt, and mulch.

Pervious concrete also has 2-3 ft. gravel bed below.

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Living soils were built in layers using all organic natural biological soils.

Soil improvement program using compost tea biological treatments,

Impervious hard surfaces are minimized. Infiltration zones are used to keep rain water on site and prevent runoff.

High efficiency drip irrigation system adjusts watering level with rain and moisture sensor system.

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Sustainability - Quality of Life

Adjacent to green space with Morgan Park and planned Greenway to Cumberland River and Bicentennial Mall.

Easy access to mass transit on every corner.

Maximum indoor thermal comfort and ambient quiet for homeowner.

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Sustainability – EarthCraft House Certification

Eighteen units are certified as EarthCraft House and EPA Energy Star qualified.

Inspections include pre-drywall inspection and final blower door and duct blaster tests.

Nine of eighteen units qualify for 2005 Energy Tax Credit, meaning at least 50% more efficient to heat and cool than international energy code requires.

EarthCraft House worksheet scores ranked in the top 5% for all certified homes.

Scores ranged from 255 to 258, for single family units and 301 for flats, all well above the 150 – 200 points required for certification.

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Sustainability – Education and Community Outreach

Educational Open House Events during and after construction.

Educational video segments for national broadcast on HGTV Channel.

Economic case study underway for BOB educational programs.