Mission for the Millenium

FACTS *IHM Motherhouse Environmentally Sustainable Design*

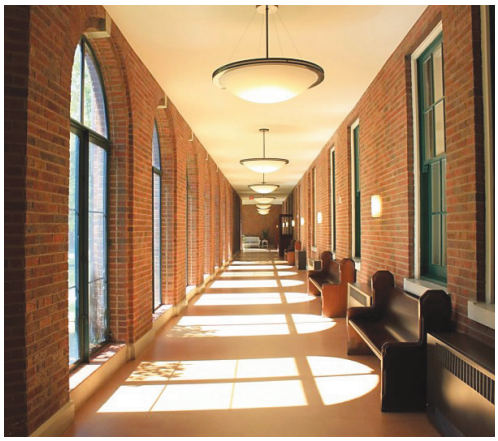
VISION OF SUSTAINABILITY WITH PRACTICAL AND REAL EXPRESSIONS

Environmentally responsive sustainable design means

- Choosing to renovate, not build a new structure, reducing impact on environment
- Reusing and recycling materials
- Installing energy-efficient HVAC systems
- Choosing passive natural energy systems
- Reducing dependence on non-renewable energy sources
- Designing indoor and outdoor space that promote sustainable community
- Using products that reduce our footprint and impact on the environment
- Restoring the site

REUSED AND RECYCLED MATERIALS

- Motherhouse wood windows (approximately 800) restored/reused
- Doors (entry, closet, 60+ cedar cabinets, 15 wood bathroom stalls)
- Wood trim, wood wainscoting, parquet floors
- Salvaged marble pieces used for countertops on cabinetry and windowsills
- More than 100 existing period light fixtures retrofitted
- Topsoil removed during the earthwork reused in the landscaping
- 45,260 sf carpet reclamation: half went to a nonprofit organization; the other half went to an incinerator; none went to a landfill.
- Ann Arbor Reuse Center: removed used but still useful building materials such as sinks, toilets, wiring, duct work
- Mass demolition contractor selection criteria included plaster recycling capability
- Recycled materials throughout construction



Geothermal system for heating and cooling with a terminal unit in every room is the basic energy-conserving system

Heat recovery system: reclaims heat from exhaust from ductwork, tempers outside cold air and reuses in outside air ducts

Water conservation: fresh-water consumption lowered by 35-50 percent

Low-flow/water-conserving fixtures and fittings

Anti-scald shower and bath fittings (thermal energy conservation)

Shower heads have maximum flow of 1.8 gpm (gallons per minute)

Lavatory faucets use aerated outlets rated at 1.5 gpm

Graywater flushing system; gray wastewater is collected from sinks and showers via a separate piping system and routed to constructed wetlands for treatment. Once the wastewater has been treated, it is returned to the building as recycled graywater. The graywater serves all flushing through water closets and can be used for "process make-up water" in the mechanical plant as well as for wash down of external areas.

Maximum use of day lighting

High-efficiency lighting: high performance lighting, compact fluorescent

Occupancy sensors/natural light control/programmed lighting

Glass selection and treatment: energy-efficient, insulated glass

Custom-designed for aging population

SUSTAINABLE PRODUCTS

- Benjamin Moore low-VOC (volatile organic compounds) paint, which reduces or eliminates toxic odors from paint
- Trex for the second floor veranda: recycled wood and plastic
- Cork flooring in the interior cloister. Cork is one of most sustainable flooring products available. Original cork still in excellent condition after 70 years use
- Drywall material: 5/8-inch gypsum wallboard

EXTERIOR LIGHTING

- 20-feet-tall light poles
- Visibility and safety
- Minimize light trespass on neighboring property
- Lowest possible light levels
- Planted buffer zone

Existing trees and landscape features were preserved.

Meadow savanna prairies diversify and restore the site.

Wet meadows and constructed wetlands imitate natural wetlands process and treat graywater.

Vegetated swales in parking lots provide natural drainage systems. This approach to storm water management provides a beautiful, landscaped section that provides habitat for birds, butterflies, etc. once the plantings have matured.

Contemplative landscapes include woodlands, meadows, pond, cemetery, courtyards, wetlands and green park space.

Sustainable urban agriculture thrives in a two-acre community organic garden.

DESIGN PROMOTES SUSTAINABLE COMMUNITY AND IS FLEXIBLE ENOUGH TO PERMIT ALTERNATIVE SPACE USAGE

- "Neighborhood" concept in each wing
- Connection to outside is integral to design
- Adaptive reuse possible

IHM sisters
MONROE · MICHIGAN

Deep Faith. Courageous Spirit. Action for Justice.