

Mission for the Millennium

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 of materials
- Installing energy-efficient HVAC systems
- Choosing passive natural energy systems
- Reducing dependence on non-renewable energy sources
- Designing indoor and outdoor space that promotes sustainable community
- Using products that will 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

- Over 100 existing period light fixtures retrofitted
- Topsoil removed during the earthwork reused in the landscaping
- 45,260 sf carpet reclamation: one-half went to a non-profit organization; the other half went to an incinerator; none went to a landfill
- Ann Arbor Reuse Center: removed used but still useful building materials like sinks, toilets, wiring, duct work
- Mass demolition contractor selection criteria included plaster recycling capability
- Recycled materials throughout construction

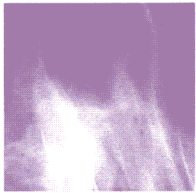
Energy-efficient HVAC systems

- Geo-thermal 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%
 - Low-flow / water-conserving fixtures and fittings
 - Anti-scald shower and bath fittings (thermal energy conservation)

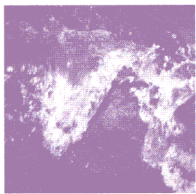
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earth



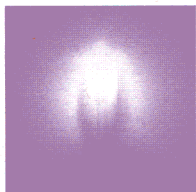
fire



water



air

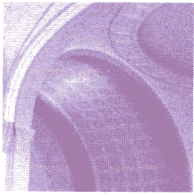


spirit



Sisters, Servants of the Immaculate Heart of Mary

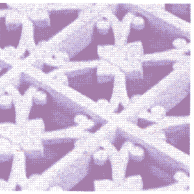
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- Shower heads have maximum flow of 1.8 gpm (gallons per minute)
- Lavatory faucets use aerated outlets rated at 1.5 gpm
- Gray water flushing system; gray wastewater is collected via a separate piping system and routed to constructed wetlands for treatment. Once the waste water has been treated, it will be returned to the building as recycled gray water. The gray water will serve 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

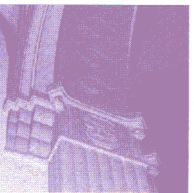


- Maximum use of day lighting
- High-efficiency lighting: high performance lighting, compact fluorescent
- Occupancy sensors / natural light control/ programmed lighting
- Glass selection and treatment: energy-efficient, insulated glass
- Custom design for aging population



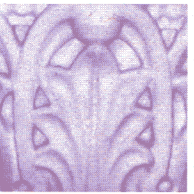
Exterior Lighting

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



Sustainable Products

- Benjamin Moore low voc paint: low volatile organic compounds reduce or eliminate toxic odors from paint
- Trex for the 2nd 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: 5/8inch gypsum wallboard



Site Restoration: A Sense of Place

- Preserve and enhance existing trees and landscape features
- Diversify and restore site with meadow savanna
- Meadows and constructed wetlands imitate natural wetlands process and treat gray water
- 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: woodlands, meadows, pond, cemetery courtyards, wetlands and green park space
- Sustainable urban agriculture: organic garden and community supported agriculture

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