SUMMARY REPORT

EXHIBITION OF ARCHITECTURE FOR ENVIRONMENTAL HEALTH (as presented at CleanMed 2004)

This poster session for
green healthcare design is also appearing at:

The Design for Health Summit, Boston, MA
September 28&29, 2004

ON THE COVER: Photo courtesy of Bill Ravanesi, **Clean Med 2004, Philadelphia PA**

This report gratefully acknowledges Clean Med and the international coalition Healthcare Without Harm for providing the opportunity to create a poster session exhibit as part of its pre-conference Green Building Workshop this year at the Clean Med 2004 Conference, Philadelphia (PA). We would also like to thank those who participated in the exhibit; a summary of their work is enclosed here. This report is being presented for the first time at The Design for Health Summit. Please visit www.cleanmed.org for a downloadable version.

Guenther 5 Architects is pleased to present the following Summary Report of the first annual poster session display that was staged at this year's Clean Med conference (April 2004, Philadelphia, PA). Called the Exhibition of Architecture for Environmental Health, it was meant to draw on a community of professionals who are working to deliver high performance 'green' buildings and reshape the healing environment.

Because a natural starting point for research into green healthcare design began with the US Green Building Council's Leadership in Energy and Environmental Design LEED™ registration website, nearly all projects list LEED as their guide and mention it on their posters. LEED is not a requirement, but rather a method of inquiry that began sometime after registering our own project. In building case study results, we wanted to find others who had pioneered this difficult process into healthcare.

It takes incentive, and a handful are fortunate to have clients initiate green strategies into their designs as part of an overall experience for their patients. It is worth noting that eight projects (out of eleven total submitted) included a Field Survey & Checklist with their poster submissions. All eight listed "Change in the healing potential of a patient's environment" as their primary approach toward healthcare facility design.

The significance of this is simply that over other standard measures to reduce energy costs, increase operational efficiency, improve the health quality of a worker's environment, or reduce impact to the natural environment, "changing the healing potential of the patient's environment" was foremost on the agenda. This suggests one of the central differences between for- and not-for-profit industries in working with LEED, and why Clean Med organizers seek a different platform; more importantly, it demonstrates green design as an organizational force for what many described as patient-centered care.

In most instances, two posters per project, in addition to the field survey, compressed squarely into the following one-page briefs. Each brief starts with a short "description" as written by the submitting agent, and follows with a section entitled "driver." Driver indicates the broad context and driving philosophy behind each project, the provider's vision, or other unique aspect governing the design process.

Not surprisingly, while drivers vary greatly in relation to the healthcare entity's sense of purpose in the (local or regional) community and market niche, key performance strategies tend to follow a commonsense logic in acting out the drivers. All looked for resource efficiency and energy savings, less site impact, and indoor environmental quality for visitors. Many took on additional strategies that fold into these basic goals including the provision for natural access to the site's attributes especially as they relate to personal well-being and optimal health.

In developing the exhibit, a primary interest lay in determining *why* certain groups chose to pursue LEED on their own, rather than in the practical matter of how to quantify their efforts. Many projects are in the preliminary phases, and for these two reasons, little is known yet about performance outcomes. Indeed, the need for these varies widely, and within the healthcare sector, emphasis appears to follow the changing nature of the patient environment, as healthcare providers respond to society's changing expectations and their own evolving body of knowledge.

Cynthia Atwood, Exhibit Coordinator
Guenther 5 Architects, PLLC

PAGE	LIST OF PROJECTS
5	ANSHUTZ INPATIENT PAVILION, UNIVERSITY OF COLORADO HOSPITAL
6	BLUEWATER HEALTH CAPITAL REDEVELOPMENT PROJECT
7	BOULDER COMMUNITY HOSPITAL FOOTHILLS CAMPUS
8	CHILDREN'S HOSPITAL OF PITTSBURGH
9	CHILDREN'S MEDICAL CENTER OF CENTRAL TEXAS
10	JO CAROLE & RONALD S. LAUDER CENTER FOR MATERNITY CARE, MT SINAI HOSPITAL
11	LAGUNA HONDA REPLACEMENT HOSPITAL & REHABILITATION CENTER
12	LEGACY HEALTH SYSTEM SALMON CREEK HOSPITAL
13	METROPOLITAN HOSPITAL AT METRO HEALTH VILLAGE
14	PATRICK H DOLLARD DISCOVERY HEALTH CENTER
15	SOUTHEAST REGIONAL TREATMENT CENTER, MADISON PSYCHIATRIC HOSPITAL

ANSHUTZ INPATIENT PAVILION, University of Colorado Replacement Hospital, Aurora, CO
Owner: University of Colorado
Architect: H+L Architecture (CO), and HDR, Inc (NE)

DESCRIPTON: The new 476,000 square foot inpatient hospital was designed not only with a patient and family focus, but also with environmentally sensitive features that should help the facility earn LEED certification. Sustainable features include: environmentally friendly (non-toxic) and highly durable materials, daylighting controls, reduced light pollution, and others. The project is complete, and has been fully operational since February 2004.

DRIVER: a) The owner's vision for the project included patient centered care. The resulting design included orientation of the building to maximize daylighting and mountain views, low VOC materials, the fresh Colorado air, water features for soothing atmosphere, and healing gardens designed with input from the local Denver Botanic Gardens; b) Planning the new hospital was achieved through a unique partnership within the community, and included more than 140 care team members to create a healing environment; c) The primary sustainable strategy was energy efficiency as accomplished through standard means;

BUILDING TYPE: 99-bed replacement hospital (new building construction

KEY PERFORMANCE STRATEGIES:

- Save energy by using high-efficiency mechanical equipment, energy efficient lighting, daylighting, high performance windows, improved insulation and occupancy sensors

- Reduce embodied energy and improve quality of the interior healing environment by selecting locally harvested and recycled materials, low VOC paints, formaldehyde-free casework and green label carpet

- Increase performance by offering additional patient controlled room features, patient education and activity spaces, local artwork and visual reminders of the world outdoors (local sandstone and brick, for example), and other mementos such as newspapers, photos and letters written by staff members.

PERFORMANCE OUTCOMES: Unknown, with certification pending

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BLUEWATER HEALTH CAPITAL REDEVELOPMENT PROJECT, Sarnia, Ontario, Canada
Owner: Bluewater Health Facilities Planning & Development/ Lambton Hospitals Group
Architect: Farrow Partnership w/ Halsall Associates (Engineers), Canada

DESCRIPTION: The Bluewater Health design team is targeting a LEED Silver rating for its new 270,000 square foot hospital addition. Innovative features such as reverse-osmosis water for toilet flushing, rainwater storage for irrigation, and the use of modular walls and furniture will reduce the hospital's environmental impact. Patients, staff, and visitors will benefit from low-VOC interior finishes and an accessible public transportation program. The project is in the planning and documentation phases, with a proposed start date of January 2005.

DRIVER: a) restore health and vitality to a community bound in its past industrial (petrochemical research and production) success; b) symbolize the transition Sarnia will make to become the "jewel of the Great Lakes"; c) become the best community hospital through visionary leadership, true teamwork and extraordinary community participation d) deliver a cutting-edge aesthetic by drawing on historical relationships and heritage concepts embedded in the rivers, bridges, and local landscapes

BUILDING TYPE: 337 beds total: acute, mental health, complex continuing care, rehabilitative (new building construction + existing acute service renovations, including modernization of service infrastructure and below-grade parking)

KEY PERFORMANCE STRATEGIES:

- Purchase green power, optimize energy performance through measurement, verification and commissioning of building systems, and reduce ozone depletion to enhance energy and atmosphere

- Manage storm water and other potable water demand by increasing water efficiency (20-30%), and installing efficient roof & non-roof plants

- Stimulate healing potential and the local economy by using locally manufactured materials (20%) and producing central, unifying features such as the Bluewater Garden and Atium Cafe

PERFORMANCE OUTCOMES: N/A

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BOULDER COMMUNITY HOSPITAL FOOTHILLS CAMPUS, Boulder, CO
Owner: Boulder Community Hospital
Architect: Boulder Associates, Inc (CO) and OZ Architecture (CO)

DESCRIPTION: The design for the Hospital integrated the use of local, renewable, recycled, low-emitting, and resource efficient materials and systems to create an inviting and nurturing setting for expectant mothers, newborns, and those recovering from illness. Energy demand was reduced by 27%, and water required for irrigation was cut in half (50%). Alternative transportation was encouraged with the installation of bicycle paths and storage racks, showers, annual bus passes, and priority parking for carpoolers. The project is complete, and has been fully operational since August 2003. It is also the first healthcare project in the nation to achieve LEED certification (Silver).

DRIVER: a) encourage resource conservation measures on site and in the building's design consistent with both shortages (water) and surpluses (open space) of the region; b) consider mothers, infants, and families as a special-needs population deserving of additional comfort and attention; c) promote community stewardship through resource efficient interiors and metaphorical references to the area

BUILDING TYPE: 154,000sf Women's & Children's Hospital w/ 67,000sf outpatient services pavilion (new building construction)

KEY PERFORMANCE STRATEGIES:

- Preserve 32-acre dedicated public open space while also planning for future expansion and additional buildings on site that does not impact this parcel
- Reduce water usage and optimize efficiency through xeriscaping, waterless urinals, electric eye faucets and the like
- Encourage alternative transportation (already located on a bike path) and support other local building and manufacturing economies to reduce transportation emissions
- Respect basic quality of life issues inside and out by eliminating light trespass off-site and into the night sky, and also introducing low-emitting materials and other features that reduce airborne particulates

PERFORMANCE OUTCOMES: See project description above.

Contact: Erica Meylan; 303.499.7795;
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CHILDREN'S HOSPITAL OF PITTSBURGH, Pittsburgh, PA
Owner: Children's Hospital of Pittsburgh
Architect: Astorino (PA)

DESCRIPTION: Astorino is designing a 1.45 million square foot campus for the Hospital, with the goal of LEED™ certification. The new complex will encompass inpatient services, ambulatory and research facilities, and three parking structures. Sustainable features include an integrated control system that allows for more efficient commissioning, operation, and verification of all building systems; low VOC materials throughout the campus; and an innovative lighting system that utilizes low mercury content bulbs. The project is currently under construction, or completing the bid phase, and has an estimated completion date for Spring 2007.

DRIVER: a) apply the firm's groundbreaking Deep Design Process(SM) to create a design that truly shapes the healing process and which transforms the hospital experience; b) rebuild and revitalize a struggling urban neighborhood that will benefit through reuse of the site and its existing structures; c) increase community activity while also providing for the needs of families with sick children, doctors and staff

BUILDING TYPE: acute care and outpatient pediatric services (new building construction and renovation)

KEY PERFORMANCE STRATEGIES:

- Creation of a campus-wide Central Plant in support of the project will help to reduce overall energy consumption at the source level; avoiding CFC and HCFC refrigerants will reduce unwanted emissions, as will a construction air quality plan and commissioning process

- In consideration of broad environmental impacts, 30% of the building area will be reused within the structure, as will significant amounts of recycled materials; additionally, materials are chosen to reduce VOC emissions, mercury content and vinyl

- Opportunities have been found to ensure that both patients and staff have a connection to the natural world. Of note is the sixth floor Transformation Garden, located on the south face of the building

PERFORMANCE OUTCOMES: N/A. A measurement and verification plan is in place to allow the hospital to track performance of the building over time, and maintain the efficiency of the building into the future.

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CHILDREN'S MEDICAL CENTER OF CENTRAL TEXAS, Austin, TX
Owner: Children's Hospital of Austin/Seton Healthcare Network
Architect: Karlsberger Companies (OH)

DESCRIPTION: The freestanding 169-bed children's hospital is the first development for the former municipal airport site. Planned on 32 acres of the 700 acre brownfield site, this project will establish the design character for the redevelopment. Natural light is available for nearly 80% of the building, and an on-site power generating facility will produce energy at a 60-70% greater efficiency rate. Native plant materials, rain water collection systems, reflective roofing, sun control, recycled materials, and the use of local & regional building materials all combine to make this project highly sustainable. The project is in the planning and documentation phases since March 2003, with an aggressive goal for LEED Platinum certification.

DRIVER: a) Reintegrate the scarred brownfield site back into the surrounding communities, creating health for children, native wildlife, and the local economy at a whole new, state-of-the-art scale; b) Improve the condition of the site (water & soil quality) while also reducing demand on the region's infrastructure (conserve potable water & electrical supply); c) Change the healing potential of the patient's environment by reducing or eliminating caustic chemistries from the interior environment

BUILDING TYPE: Regional inpatient facility (new building construction)

KEY PERFORMANCE STRATEGIES:

- Reclaim and improve the quality of this former brownfield site with native plantings that reduce the amount of water used to sustain growth, and attract native wildlife. In addition, collect rainwater through an underground cistern to eliminate any use of potable water.

- Mitigate a large building footprint (heat island effect) and improve interior quality of the healing environment with interior courtyards, 'orchard' plantings, reflective roofing and other architectural sun control "sun brow" features.

- Generate full and reliable energy supply through an on-site power generating facility at an efficiency rate 60-70% efficiency rate greater than the current power grid. On-site generation moves the city's central utility supply to an emergency back-up response only, thereby reducing potential burden to the local economy.

PERFORMANCE OUTCOMES: See project description above. On-site power generation will produce 100% of the facility's power.

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JO CAROLE & RONALD S LAUDER CENTER FOR MATERNITY CARE, New York, NY
Owner: Mount Sinai Hospital
Architect: Guenther 5 Architects (NY), and Larsen Shein Ginsberg Snyder (NY)

DESCRIPTION: The Center for Maternity Care is a partial renovation and full cosmetic upgrade of a 10,000 square foot recovery floor in The Women's Center, an outpatient pavilion for Mt Sinai Hospital. This project introduced a natural materials palette (and greener alternatives) into a medical setting to enhance the spa-like aesthetic and create urban appeal. Because newborn infants are highly vulnerable to trace chemicals in the environment, a strong desire to use neutral cleaners and benign materials was sought by the nursing staff from the beginning. The project is complete, and has been fully operational since May 2003.

DRIVER: a) Create a healthier chemically neutral newborn environment by removing materials that off-gas or are extremely harmful to human health in their manufacture; b) Engage with nature using operable windows and views out onto Central Park in staff and patient spaces; c) Achieve a desirable aesthetic at no additional cost through skilled tradeoffs in the floor's design

BUILDING TYPE: recovery floor, obstetrics department (renovation)

KEY PERFORMANCE STRATEGIES:

- Specify environmentally sustainable materials and all-natural disinfectants for low emissions, better environmental stewardship, and cleaner indoor air quality

- Reuse a significant portion of existing assemblies, taking down those that allow a continuous pathway of natural light into the interior core

- Collaborate with nursing teams on key decisions affecting their health, performance and well-being, and which will lead them to champion green housekeeping protocols elsewhere in the building

PERFORMANCE OUTCOMES: Unknown.

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LAGUNA HONDA REPLACEMENT HOSPITAL & REHABILITATION CENTER, San Francisco, CA
Owner: San Francisco Department of Public Health
Architect: Anshen+Allen Architects w/Gordon H Chong Partners (CA)

DESCRIPTION: The project is part of a pilot program for benchmarking the sustainable design of all future City of San Francisco development. This 850,000 square foot public replacement hospital (including acute general medical facilities, acute general rehabilitation, and 1,170 skilled nursing facility beds) is designed to be LEED certified, focusing on indoor environmental quality that creates a healthy environment for patients and staff. The project is currently under construction, or completing the bid phase, and has an estimated completion date between 2007-2009.

DRIVER: a) Work with San Francisco's Green Building Pilot Projects, as coordinated by the San Francisco Department of the Environment to improve and/or reduce impact to the state's available resources (energy, timber, water, landfill, air, transportation); b) Provide housing and a complete continuum of long-term healthcare services, focusing on indoor environmental quality and a healthy environment for patients and staff; demonstrate highly efficient operational performance

BUILDING TYPE: residential inpatient facilities for long-term healthcare services (new building construction on an existing historic campus)

KEY PERFORMANCE STRATEGIES:

- Strive for energy reductions to a level at least 30% below Title 24 Energy Code; additionally, self generate at least 5% of the total power requirement using micro turbines, solar and fuel cells; and finally, in partnership with California Energy Commission's "cool community" program, reduce heat island effect (cooling demand) with high-albedo roofs and parking surfaces, shading devices and planting materials

- Reduce water consumption by 50% from standard baseline measures and strive divert at least 90% of the construction and demolition debris from the landfill through recycling and reuse programs

- Reduce automobile traffic to the site with ride sharing, public transit access, improved use of shuttles, and load management; additionally, encourage the use of bicycles and alternative fuel vehicles

- Develop a sustainable building operations plan using LEED's Operations Rating Systems that includes medical products, furniture and cleaning products

PERFORMANCE OUTCOMES: N/A. See Key Performance Strategies, above

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LEGACY HEALTH SYSTEM SALMON CREEK HOSPITAL Vancouver, WA
Owner: Legacy Health System
Architect: Zimmer Gunsul Frasca Partnership (OR) w/Walker Macy Landscape Architect (OR)

DESCRIPTION: Legacy's Salmon Creek Hospital and parking structure are located on a 24-acre site in a rapidly growing area of Clark County, Washington. The hospital will have 165 beds in the first phase, with future expansion flexibility toward 220. It will include emergency medicine, surgery, a comprehensive cancer center, diagnostics, and maternity, in addition to a 15-bed Level III NICU. This state-of-the art facility will incorporate healing gardens, daylighting, and advanced building systems while providing clear connections to the community it serves. The project is currently under construction and has an estimated completion date of July 2005.

DRIVER: a) An integrated design approach is intended to respect the interconnectedness of building practices and healthcare outcomes; b) Improving the health of building occupants and the community through reduced energy consumption, low-toxic materials, and resource efficiency were foremost concerns; c) Contact with nature was emphasized for staff, patients and visitors with the intention that all would have the therapeutic benefits of interaction with the outdoors

BUILDING TYPE: new medical campus (470,000sf hospital, 2 Medical Office Buildings totaling 180,000sf, and a 1,480 space parking structure

KEY PERFORMANCE STRATEGIES:

- Perform daylight modeling for perimeter zones to establish efficient energy levels.
- Reduce building footprints on site and include restorative gardens inside and out, including both the Central Garden and the Chapel Roof Garden
- Provide connectivity, easy access and better circulation with a compact plan, elevated, enclosed pedestrian bridges, and dynamic layout of the nursing wings.

PERFORMANCE OUTCOMES: N/A, see Project Description, above

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METROPOLITAN HOSPITAL AT METRO HEALTH VILLAGE, Wyoming, MI
Owner: Metropolitan Healthcare Village
Architect: HDR, Inc (NE)

DESCRIPTION: Metropolitan Hospital is a new 482,000 square foot facility. It will be the first one built on this new 170 acre healthcare campus, for a total of 207 beds planned. Construction cost is estimated at $91,000,000. The project is LEED v2.1 registered, and seeking Silver certification. Health Care Village is the first to be built on a large campus using a village *green* master plan, which includes retail buildings, a medical office building, and numerous other healthcare services. The project is currently under construction, or completing the bid phase, and has an estimated completion date for April 2006.

DRIVER: a) Position the future of medical care delivery for optimum visibility and identity; b) Introduce green as a focal point for the campus, patterned in a pedestrian-friendly layout that promises to establish village character and a branded image; c) Give form to Metropolitan's vision that the new facility serve as the heart of the village, focusing on complementary, master planned uses;

BUILDING TYPE: replacement facility, including outpatient/ ambulatory centers and an advanced energy & sustainability center

KEY PERFORMANCE STRATEGIES:

- On-site power generating energy plant with waste heat recovery will be used as an educational facility for sustainable design and LEED, and will include a bioremediation waste treatment system for the hospital in its Phase II development

- Develop a central green space and Energy star roof to reduce the absorption of heat and reduce cooling needs, and manage storm water runoff also

- Enhance the interior environment though abundant natural daylight, minimal use of PVC building materials, low-emitting interior finishes, patient controls of lighting and temperature

PERFORMANCE OUTCOMES: N/A. Plans will incorporate extensive measurement and verification procedures so the hospital can track its performance

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PATRICK H DOLLARD HEALTH CENTER, Harris, NY
Owner: The Center For Discovery
Architect: Guenther 5 Architects (NY)

DESCRIPTION: This Article 28 diagnostic and treatment facility (28,000sf) serves 250 full-time residents who require constant and specialized medical care This is the first licensed medical facility for The Center (a residential school for children, and outpatient facility for adults), and also the first in the State of New York to implement green building standards that meet Department of Health requirements. Green measures safeguard already fragile health, and build the foundation for a high-performance healing environment on campus. Latent heat from the earth provides a stand-alone energy source, while much of the development focuses on restoring the landscape's healing capacity. The project is complete, and has been fully operational since Spring 2003.

DRIVER: a) Develop healing potential and other enjoyment of life qualities through connections to an open landscape, energy independence, and healthy building materials; b) Improve the site's natural integrity by avoiding prime agricultural land and developing instead the previously abandoned chicken farm; c) Safeguard already fragile health conditions and promote personal comfort and emotional well-being by securing clean air, fresh water, daylight views, personal choice, and freedom of movement

BUILDING TYPE: outpatient facility (new building construction)

KEY PERFORMANCE STRATEGIES:

- Build a non-polluting off-the-grid power supply to alleviate concern for disrupted service that would further harm patients should a blackout occur

- Eliminate environmental stressors that further complicate human health either in their manufacture or in use by selecting those products that are environmentally preferable, non-toxic, sustainably harvested, recycled, and low-emitting

- Chose LEED and other strategies as part of an environmental health mission framework that links building operations, site selection and material construction to the community fabric

PERFORMANCE OUTCOMES: 48% less energy used than base model predictions; after seeing the philosophical benefits of using green design, the client engaged in a process of organizing future developments around an entirely sustainable mission, as it already supports their quality of life and health goals

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SOUTHEAST REGIONAL TREATMENT CENTER, Madison Pyschiatric Hospital, Madison, IN
Owner: Indiana State Office Building Commission
Architect: Hellmuth, Obata, + Kassabaum (MO) and Ratio Architects (IN)

DESCRIPTION: HOK Health Care has been selected, along with RATIO Architects, by the Indiana State Office Building Commission to program and design a new South East Regional Treatment Center in Madison, Indiana. The psychiatric hospital serves eighteen counties in the southeast region of Indiana and has a 650 acre campus overlooking the Ohio River. The new facility will support state-of-the-art treatment and therapy for inpatients with serious mental illnesses and/or developmental disabilities. Estimated completion: 2005

DRIVER: a) Environmentally sensitive and "contextual" use of State resources (historic building preservation & historic natural landscape). Four of the six buildings overlook the Ohio River ("bluff" buildings), and will be renovated to ensure up-to-date treatment modalities and historic preservation requirements are met; b)Iimprove the quality of patient living with care for those places created, while much of the state's mental health delivery system is working to be reconfigured through the State Office Building Commission.

BUILDING TYPE: Regional inpatient & outpatient mental illness/ Developmentally disabled facility (Adaptive Reuse)

KEY PERFORMANCE STRATEGIES

- Improve the thermal envelope of this 100-year old building by using new insulated windows and drywall finish; Program common spaces and private living quarters to maximize daylighting and exposure to outside views

- Fine-tune the mechanical systems (using computer energy modeling) for optimal HVAC efficiency and patient comfort

- Divert construction waste from the landfill (50%) by developing a construction waste management program

PERFORMANCE OUTCOMES: N/A, as it is still in the planning phases. See also Key Performance Strategies, above.

Contact: Paul E Strohm; 314.421.2000; paul.strohm@hok.com

WASHINGTON STATE VETERANS HOME, Skilled Nursing Facility, Retsil, WA
Owner: Washington State Department of Veterans Affairs
Architect: NBBJ (WA)

DESCRIPTION: "Resident Centered Care" is the model of care around which this 240-bed skilled nursing facility for veterans is designed. The model, and the architecture supporting it, is developed to enhance dignity, individual control, and personal choice as to the type of service and level of care. Creating the highest quality healing environment for both staff and residents is essential for achieving the best places to live and work. This facility is expected to achieve LEED Silver rating. The project is currently under construction, or completing the bid phase, and has an estimated completion date of January 2005.

DRIVER: a) Collaborative interaction with partner organizations that would create the best skilled nursing environment and a better life for resident veterans at the same time; b) Create a place of human interaction and community connection and, likewise, a connection to nature that brings them to the world outdoors; c) Incorporate components of sustainable design that offer dignity and patient control

BUILDING TYPE: 240-bed skilled nursing facility (new building construction)

KEY PERFORMANCE STRATEGIES:

- Innovate an exception to the State of Washington's design comfort standards for mechanical cooling to allow instead the much preferred natural cooling (as engineered through building placement and orientation, operable windows and the like). The innovation allows the building to receive breezes blowing from the Sinclair Inlet that are consistent with this site's year-round mild climate.

- Provide exceptional air quality by again accessing the site's natural resource for maximum fresh air exchanges (greater than would be possible with a mechanically cooled system), including those additional design features and thermal mass that promote cross-ventilation.

- Sustainable design principles guide all aspects of the landscape development as consistent with a desire to promote the natural beauty of the setting and support its natural functioning (i.e. minimize excavation, manage storm water runoff and conserve water, select indigenous plants)

PERFORMANCE OUTCOMES: N/A

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The architectural firm **WATKINS, HAMILTON, ROSS** presented: ***"Top Ten Green Myths: BUSTED."***

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Other remaining hospitals and healthcare systems that were contacted through the US Green Building Council's official LEED™ registration website include these. Look for these and others (including those developed using the new Green Guide for Health Care™) next year.

ALBERTA HEART INSTITUTE, Capital Health

THE CHILDREN'S HOSPITAL OF DENVER, University of Colorado Health Sciences System

CREDIT VALLEY HOSPITAL, Credit Valley Health System

DENVER HEALTH HOSPITAL, Denver Health Medical Center

GEAUGA YMCA, University Hospitals Health System Heather Hill

ISAAC RAY TREATMENT FACILITY, Logansport State Hospital, Indiana State Office Building Commission

JEWISH HOSPITAL MEDICAL CENTER, Jewish Hospital Healthcare Services

MCKENZIE-WILLAMETTE MEDICAL CENTER, Triad Hospitals

NEW PRENTICE WOMEN'S HOSPITAL, Northwestern Memorial Hospital

PROVIDENCE NEWBERG HOSPITAL, Providence Health System

RENAISSANCE PROJECT, Fletcher Allen Healthcare

RICHARD J. LACKS SR. CANCER CENTER AT SAINT MARY'S, Trinity Health System

SACRED HEART MEDICAL CENTER, Providence Services

THUNDER BAY REGIONAL HOSPITAL, Thunder Bay Regional Health Sciences Centre

WARREN MEDICAL OFFICE CAMPUS, St Francis Health System