



Van Andel Institute®

**VAN ANDEL INSTITUTE PHASE II EXPANSION
OVERVIEW AND FACT SHEET**

<http://www.vai.org/About/Facilities/PhaseII.aspx>

On May 17, 2005, in celebration of Van Andel Institute's fifth anniversary, Van Andel Institute (VAI) Chairman and CEO David Van Andel announced plans for Phase II, an expansion of the Institute's medical research and education facility.

On December 8, 2009, VAI officials cut the ribbon on its eight-story, \$178 million, 240,000 square-foot expansion that adds to the more than \$1 billion in life sciences infrastructure investment already in place along downtown Grand Rapids' Medical Mile.

NUMBERS / FACTS

- **Cost:** \$178 million; financed through private funds and bond issuance
- **Size:** 240,000 square-feet; eight stories high – lab space nearly tripled
- **Operating Capacity:** expansion will ultimately support an operation in excess of \$125 million annually
- **Staff:** operating at capacity, VAI expects to employ approximately 800 people (approximately 550 new jobs)
- **Location:** directly to the west of the existing facility fronting North Division Avenue and bordering Crescent Street in downtown Grand Rapids, MI
- **Timeline:**
 - Approved by Grand Rapids Planning Commission: October 2006
 - Site Preparation: Spring 2006
 - Groundbreaking: April 12, 2007
 - Concrete and Steel Work and Building Enclosure Complete: December 2008



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- Topping Off: October 1, 2008
- Final Completion: December 2009

OPPORTUNITIES

- Laboratory space will nearly triple for expanded basic and translational disease research, including an additional focus on neurodegenerative disorders and other diseases
- Expansion will feature the \$4.2 million Jay Van Andel Parkinson Research Lab
- Space will be utilized by students of the Van Andel Institute Graduate School and Michigan State University's College of Human Medicine, which will offer new avenues of collaboration with VAI researchers
- Building will be LEED certified to have minimal impact on the environment
- Capacity to create 550 new jobs
- The Institute's total annual impact on the local economy could grow to exceed \$300 million annually
- Additional space will help the Institute to maximize the potential of its alliance and affiliation agreement with the Translational Genomics Research Institute (TGen), of Phoenix
- Recruitment has already begun to fill key posts for several proposed Centers of Excellence and other new initiatives

SUSTAINABLE FEATURES

- Triple pane insulated glass with low-E coatings on two surfaces keeps winter heat in and reduces summer solar heat gain
- Sun shades on the café glass wall reduce solar heat gain during the summer when the sun is higher in the sky



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- High-albedo (light-colored) roof coverings reflect the sun's heat and reduce the heat island effect.
- Photovoltaic panels on the roof of the new and existing building provide power to implement a peak shaving plan reducing energy demands during the hottest days of summer
- Heat recovery system designs reclaim heat from equipment to reduce heating demand loads on HVAC equipment
- Low-flow toilet fixtures reduces the demand for potable water by more than 40%, also reducing the demand on the sanitary waste system
- Each floor is equipped with lockers, showers and changing facilities to encourage alternative forms of transportation for staff including; public transportation (the Rapid ECO bus), bicycle commuters and pedestrians.
- Daylight controls automatically reduce lighting levels in the building to reduce energy consumption
- Intelligent Building Controls, right-sizing of equipment and system commissioning reduce overall energy usage, provide feedback on system performance, and identify areas for improvements
- Green roofs and ivy walls provide reduced heat island effect, control rainwater runoff, and provide improved views in the urban environment
- The 33,000 gallon rainwater storage tank stores roof runoff for use in irrigation and cooling tower make-up water, reducing the requirement for potable water
- The project redevelops a Brownfield urban site
- The construction team has diverted over 79% of the construction waste from landfills
- The use of locally manufactured materials keeps money in the community and reduces energy costs and greenhouse gases generated by shipping and transportation of materials



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- Materials with high recycled content reduce VOCs generated during the manufacturing process and reduce pressure on landfills
- Products with low-VOC content improve indoor air quality during construction and during occupancy
- Electronically transmitted drawings and project information reduce the paper load, saving trees, water and file storage requirements
- Facility-wide, employee-initiated recycling programs and sustainable purchasing policies improve the work environment and reduce the overall carbon footprint of the Van Andel Institute.
- The facility is served by four public bus lines with an aggregate of over 200 rides per day, thereby permitting staff and visitors to avoid parking costs and save motor fuel energy

DESIGN / DETAILS (some details also apply to Phase I elements)

- The facade of the addition mimics the cascading roofs and windows of the current VAI building
- The building profile, which developed in direct response to the scientific program demands, to specific points of entry and views, and to the site's topography, yields a unique image for the Institute, one that evokes the Grand Rapids River in its hillside cascade of skylight roofs
- Day-lit open laboratories offer the highest quality environment for scientists. The skylight roof over the open laboratory space is a unique configuration for a research facility.
- Modular pre-fabricated laboratory casework, with services fed from the floor, increase floor-planning flexibility. This allows for the change-out of casework for furniture or equipment as space uses evolve.



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- The 18-foot floor-to-floor height allows for an interstitial space above the laboratory ceilings, permitting maintenance and upgrades to occur without interrupting the science
- Basic laboratory components on each floor include autoclave rooms, environmental rooms, spaces for microscopy and tissue culture, and unassigned research space to be fit out at a later date as new scientific users join the Institute. This planning approach provides flexibility without compromising safety, because each floor can accommodate a wide range of user requirements without requiring renovations in response to changing scientific needs. Segregated office, copy and break areas further contribute to safe laboratory usage.
- With the 325-seat Tomatis Auditorium and the Cook-Hauenstein Hall in Phase I, and a 90-seat conference center and a 100-seat cafeteria planned for Phase II, the Institute is capable of hosting a major scientific research conference. In addition, several meeting rooms per floor also accommodate daily researcher and staff interaction needs.
- Mechanical floors at the topmost and lowest floors allow for efficient servicing of all areas by means of the regularly placed concrete cores

PROJECT TEAM

- Rafael Viñoly Architects PC returns to the project as the design architect. As architect of record for Phase I, the New York-based firm created the original design for the future structure.
- Hunt / Owen-Ames-Kimball, A Joint Venture, will offer construction management services. Hunt, headquartered in Indianapolis, IN, provides national experience, and Grand Rapids-based Owen-Ames-Kimball provides local expertise.
- Culhane & Fahrenkrug Consulting, LLC are providing comprehensive oversight for every aspect of Van Andel Institute Phase II expansion. Culhane &



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Fahrenkrug pre-qualified the design professionals and construction manager prior to selection. During the planning and design phase of the project Culhane & Fahrenkrug managed the efforts of the architect and construction manager and acted on behalf of Van Andel Institute. They are managing the efforts of the construction team reviewing the sub-contractor selection process, project schedule, project budget and quality. As owner's representatives, Culhane & Fahrenkrug is looking out for the best interests of Van Andel Institute to deliver the project on time and within budget.

- Civil engineering, landscape architecture and interior design services are provided by the local offices of URS, an architectural, engineering and planning firm.
- Fishbeck, Thompson, Carr & Huber, a Grand Rapids-based civil, engineering, environmental, architectural engineering firm, provided LEED administration and building commissioning. Leadership in Energy and Environmental Design (LEED) promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.
- Grand Rapids-based Materials Testing Consultants provided geotechnical services including sub-surface investigation and construction testing.
- CommTech Design is a Grand Rapids-based technology design firm providing design expertise in communications cabling, telephone systems, data networks, audio/video systems and security systems.

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Van Andel Institute is an independent research organization dedicated to preserving, enhancing and expanding the frontiers of medical science, and to achieving excellence in education by probing fundamental issues of education and the learning process.

Established by Jay and Betty Van Andel, its goals include identifying new cancer genes



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and their proteins, developing new methods for detecting cancer before it becomes life threatening, and identifying new biological targets for therapeutic intervention.

Rafael Viñoly was born in Uruguay in 1944 and by the age of 20 was a founding partner of Estudio de Arquitectura, which would become one of the largest design studios in Latin America. His celebrated early work transformed the landscape of Argentina, where this practice was based. In 1978 Viñoly moved to the United States with his family and, in 1982, Viñoly founded Rafael Viñoly Architects PC, a New York City-based firm with offices in Lower Manhattan and London that employs over 170 people. Through this highly developed entity, Viñoly has completed many critically acclaimed public sector buildings as well as private and institutional commissions, including the Tokyo International Forum (Japan), the Kimmel Center for the Performing Arts (Philadelphia), the Howard Hughes Medical Institute Janelia Farm Research Campus (Virginia), the Leicester City Theatre and Performing Arts Centre (United Kingdom), and the Cleveland Museum of Art (Ohio).

Viñoly's work has always been driven by the belief that the essential responsibility of architecture is the elevation of the public realm. As in his much-publicized proposal for the World Trade Center site, his deepest focus has been on maximizing the opportunity for the real civic investment generated by every construction project. Viñoly has a reputation as an architect of great imagination and immense professional rigor and his work is marked by a sustained structural originality, which transcends the passing fads of architectural movements.

In addition to his many successes in competitions, Viñoly's work has been recognized in the world's leading design publications and by numerous design excellence awards. Viñoly became a fellow of the American Institute of Architects in 1993 and is a member of the Japan Institute of Architects. He lectures widely in the United States and abroad.



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Culhane & Fahrenkrug Consulting, LLC is a Grand Rapids-based professional firm specializing in owner's representative services for design and construction projects. Culhane & Fahrenkrug provide comprehensive consulting services for pre-construction, construction, and post occupancy evaluations. Pre-construction services provided can include: site selection, consultant qualifications and selection, program management, project programming, and project management during the drawing development phase. Construction services provided can include contractor qualifications and selection, construction oversight, project management, and project closeout. Post occupancy evaluations include verification of the design and construction goals and one year walk-through with the owner and project team.

Their unique expertise in the design and construction process comes from over 40 years of experience in the construction industry. William W. Culhane, architect LEED, has 23 years experience in programming, design, and construction administration. Mathew J. Fahrenkrug, construction professional, has extensive experience in cost control and construction management in his 18+ years in the profession.

Hunt Construction Group, Inc. is an experienced, client-focused construction management and general contracting firm with a successful 61-year history. Hunt has proven professional management systems, noteworthy financial stability, buying power, and a business approach that is cooperative. Their ability to deliver exceptional quality on projects is evidenced by the buildings they deliver. Hunt completes \$1.8 billion of work annually, and averages between \$6 billion and \$8 billion of work under contract at any given time.

Owen-Ames-Kimball Co., located in downtown Grand Rapids, was established in 1891. As an employee owned construction company, Owen-Ames-Kimball is committed to the highest standards of quality and excellence. The firm continually adapts its business strategies to meet the changing trends in the industry and its dedication to quality services



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in general contracting, construction management and design/build has remained constant through the years. The company's annual volume has grown to over \$220 million. Owen-Ames-Kimball has offices in Western Michigan and Southwest Florida.