



ONE COMPANY | *Many Solutions*™

HDR

Overview

We do not need to look for a company culture... we live one.



Charles Durham



Willard Richardson



H.H. Henningson

Headquartered in Omaha, Nebraska, HDR was founded in 1917 as the Henningson Engineering Company. The employee-owned company pioneered water and sewer systems for new cities and towns throughout the Midwest, helping them emerge from frontier status.

Today, HDR is an architectural, engineering and consulting firm with more than 6,000 professionals in over 140 locations worldwide. All of which are committed to helping clients manage complex projects and make sound decisions.

HDR is consistently ranked among the top architecture and engineering firms by leading industry publications including *Engineering News-Record*, *Modern Healthcare*, *Environmental*

Business Journal, *Interiors*, and *Building Design and Construction*. For example,

Modern Healthcare has ranked

HDR in the top four healthcare design firms every year since 1978, and ENR has ranked HDR among the top 50 design firms since 1967.

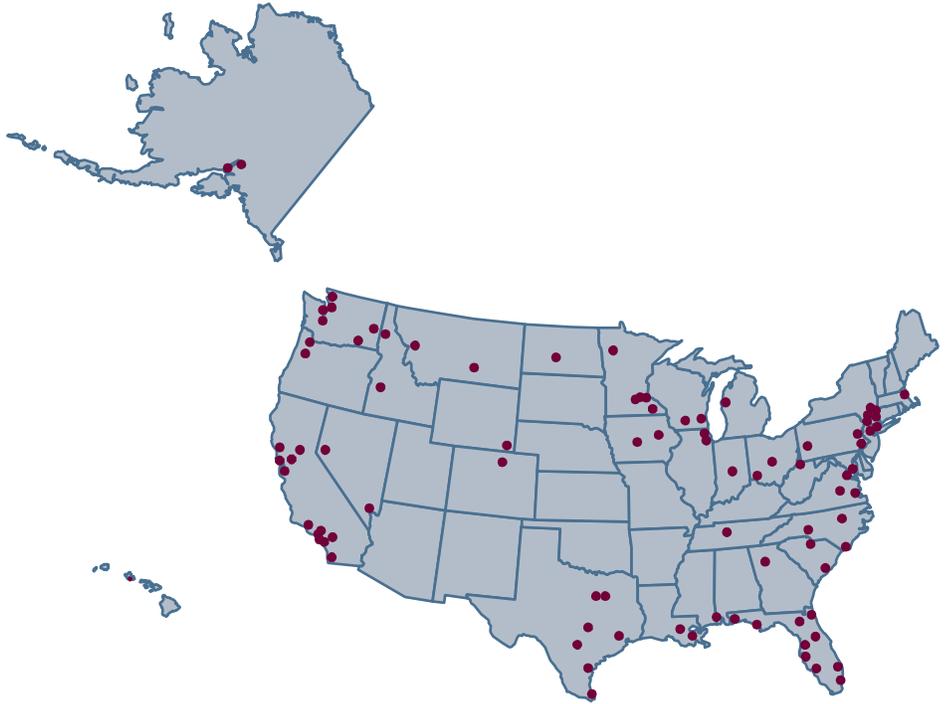
HDR has a leading role in landmark projects ranging from the Hoover Dam Bypass to design upgrades for the Pentagon and key projects in the Comprehensive Everglades Restoration Plan, the world's largest ecosystem restoration effort. Thousands of smaller projects across the nation are not as instantly recognizable, yet they improve the quality of life for residents of the communities where they take place.

While HDR's services have evolved to manage increasingly complex projects ranging from nanotechnology to infrastructure security, one thing that hasn't changed is commitment to the values upon which HDR was founded. These values include respect, integrity, empowerment, innovation, teamwork and responsibility. HDR's mission is to be a superior professional firm known for vision, value and service to our clients, our communities and employees.

HDR provides solutions that help clients meet complex challenges.

Design Centers

Albuquerque, NM	Murphysboro, IL
Alexandria, VA	Nashville, TN
Allentown, PA	New Orleans, LA
Anchorage, AK	Newark, NJ
Atlanta, GA	New York City, NY
Austin, TX	Norfolk, VA
Baton Rouge, LA	North Salt Lake, UT
Bayview, TX	Nyack, NY
Billings, MT	Olympia, WA
Bismarck, NC	Omaha, NE
Boise, ID	Orange County, CA
Bonita Springs, FL	Orlando, FL
Boston, MA	Palmer, AK
Burlington, WA	Panama City, FL
Calabash, NC	Pasadena, CA
Cedar Rapids, IA	Pasco, WA
Charleston, SC	Pearl River, NY
Charlotte, NC	Pensacola, FL
Chaska, MN	Philadelphia, PA
Cheyenne, WY	Phoenix, AZ
Chicago, IL	Pittsburgh, PA
Cincinnati, OH	Port Orchard, WA
Coeur d'Alene, ID	Portland, OR
Colorado Springs, CO	Raleigh, NC
Columbus, OH	Rapid City, SD
Corpus Christi, TX	Reno, NV
Dallas, TX	Richmond, VA
Denver, CO	Riverside, CA
Des Moines, IA	Rochester, NY
Fort Collins, CO	Rock Hill, SC
Fort Myers, FL	Sacramento, CA
Fort Worth, TX	Salem, OR
Goshen, NY	Salt Lake City, UT
Honolulu, HI	San Antonio, TX
Houston, TX	San Diego, CA
Indianapolis, IN	San Francisco, CA
Jacksonville, FL	Santa Fe, NM
Juneau, AK	Santa Rosa, CA
Kansas City, MO	Sarasota, FL
Philadelphia, PA	Seattle, WA
Lake City, FL	Silver Spring, MD
Las Vegas, NV	Sioux Falls, SD
Lincoln, NE	Springfield, IL
Long Beach, CA	St. Louis, MO
Los Angeles, CA	St. Paul, MN
Louisville, KY	Tampa, FL
Ludington, MI	Thief River Falls, MN
Madison, WI	Tucson, AZ
Miami, FL	Ventura, CA
Milwaukee, WI	Walnut Creek, CA
Minneapolis, MN	Wappingers Falls, NY
Missoula, MT	Weirton, WV
Mobile, AL	West Palm Beach, FL
Mountain View, CA	White Plains, NY
	Woodstock, IL



History and Size

- Founded in 1917
- More than 6,000 Employee-Owners
- Over 140 Offices Nationwide and Abroad
- Full-Service, Multidisciplinary Staff
- www.HDRinc.com

Business Indicators

- Ranked Number 19 Among *Engineering News-Record's 2006 "Top 500 Design Firms"*
- Ranked Number 1 in the *Modern Healthcare 2006 "Annual Construction & Design Survey of Healthcare Architects"*
- Work Obtained from Repeat Clients: 80 Percent
- Projects in all 50 States and More than 60 Countries

International Affiliates

- HDR de Puerto Rico, P.C.
- HDR International, Inc. – London, United Kingdom
- HDR Polska
- HDR Mexicana, S.C.
- Henningson, Durham & Richardson International, Inc.
- HDR|HLB Decision Economics, Inc. – Ottawa and Toronto, Ontario, Canada

Design Services

Planning Services		<p>Land Use Planning Environmental Analysis Facility Evaluation Master Planning Functional Programming Site Development Feasibility Studies</p>	<p>Traffic Planning Life Cycle Costing Laboratory Planning Equipment Planning Operational Planning Strategic Planning Finance Consulting</p>
Architectural Services		<p>Architectural Design Construction Administration Project Scheduling Computer-Aided Design Landscape Architecture Post Occupancy Evaluations</p>	<p>Smart Building Technology Specifications Sustainable Design Budgeting Code Reviews Relocation Services</p>
Interior Architectural Services		<p>Interior Master Planning Space Planning Interior Design Finish Standards</p>	<p>Furniture Selection Graphic Design Signage Systems Wayfinding Design</p>
Engineering Services		<p>Mechanical Engineering Electrical Engineering Structural Engineering Civil Engineering Traffic Engineering</p>	<p>Utility Energy Conservation Environmental</p>
Security & Technology Services		<p>Security Hardware Infrared Security Glazing Fiberoptics Security Barrier Motion Detection Electronic Security CCTV</p>	<p>Data/Telecommunications Systems Control Console Anti-terrorism Counter Measures Evidence Presentation Courtroom Automation Record Storage/Retrieval Weapon Screening/Detection</p>

Science & Technology

Overview | *Architects and Engineers dedicated to the design of Advanced Research and Development facilities.*



Los Alamos National Laboratories
Nonproliferation and International Security Center

HDR understands the complexity involved in research and advanced technology facility design and as a result has established the Science & Technology Design Program that consists of planners, programmers, architects, and engineers who are dedicated solely to the design of technology-intensive facilities.

By specializing in the design of advanced technology and research facilities, HDR has become one of the nation's leading firms in these areas. Having completed more than 150 research facilities involving over 35 million square-feet of space, HDR has gained a depth of understanding in how to design a flexible, functional and cost-efficient research facility.

Our projects have encompassed a broad spectrum of advanced technology facilities that include biomedical and animal research laboratories, computer centers, environmental test chambers, manufacturing facilities, clean rooms, and lab support space.

As technology grows more complex, clients are demanding critical expertise and practice in building design.

Our clients represent a broad cross section of the scientific and technology community. Clients include such federal agencies as the Department of Energy, Department of Defense, National

Institutes of Health, and the US Army Corps of Engineers. Corporate clients include Abbott Laboratories, Amgen, Micron Technology, Hewlett-Packard, and Motorola. Higher education clients include Creighton University, Duke University, Johns Hopkins University, University of Colorado, University of North Carolina-Chapel Hill, University of Nebraska, and the University of Virginia.



Johns Hopkins University School of Medicine
Cancer Research Building



Sandia National Laboratories
Center for Integrated Nanotechnologies



Ventana Medical Systems
Corporate Headquarters, Research &
Development and Manufacturing Facility

Recognition and Awards

As is the critical nature of our profession, we have graciously accepted numerous awards for our contributions to the design vernacular over our long history. These awards convey a range of recognition from local communities to the regional and national acclaim of the American Institute of Architects.

<p>Advanced Measurement Laboratory for the National Institute of Standards & Technology Gaithersburg, MD</p>		<p>2005 R&D Magazine's Lab of the Year High Honors 2005 Building Design & Construction magazine's Bronze Special Commendation Building Team Project Award</p>	<p>2004 Mid-Atlantic Construction Magazine's Overall Project of the Year Award</p>
<p>Bunting-Blaustein Cancer Research Building at Johns Hopkins University School of Medicine Baltimore, MD With Zimmer Gunsul Frasca Partnership</p>		<p>2000 Education Interiors Showcase American School & University magazine's 2000 Architectural Portfolio Outstanding Buildings Specialized Facility American School & University magazine's</p>	<p>Craftsmanship Awards Building Congress & Exchange of Metropolitan Baltimore Merit Award Winner in Recognition of Exceptional Design ABC Baltimore Metropolitan Award of Excellence</p>
<p>Biomedical Engineering and Medical Sciences Building at the University of Virginia Charlottesville, VA With Kallmann McKinnell & Wood Architects</p>		<p>2002 Architectural Portfolio Outstanding Buildings American School & University magazine's</p>	<p>2002 Outstanding Architectural Masonry Design Honorable Mention Mid-Atlantic Region Masonry Institute</p>
<p>Harvey W. Wiley Federal Building Center for Food Safety and Nutrition for FDA College Park, MD With Kallmann McKinnell & Wood Architects</p>		<p>2002 National Citation GSA Design Awards</p>	<p>2002 Craftsmanship Award Washington Building Congress</p>

Recognition and Awards *Continued*

<p>Hixson-Lied Science Building, at Creighton University <i>Omaha, NE</i></p>		<p>2005 Interior Design Excellence, Outstanding Projects American School & University Magazine</p>	<p>2004 Outstanding Buildings, Post Secondary Architectural Portfolio, American School & University Magazine</p>
<p>Nicholas C. Metropolis Center for Modeling & Simulation at Los Alamos National Laboratory <i>Los Alamos, NM</i></p>		<p>2002 National Award for Industrial/Process Sector Building over \$25 Million Design Build Institute of America 2001 Mechanical Project of the Year Southwest Contractor magazine 2001 Los Alamos Awards Program Los Alamos National Laboratory</p>	<p>2002 National Award of Achievement Deputy Secretary, Department of Energy 2002 National AON Build America Award for Design-Build Associated General Contractors of America 2001 Performance Excellence Award DOE Albuquerque Operations Office</p>
<p>Freedom Center for the Omaha World-Herald <i>Omaha, NE</i></p>		<p>2002 Project of the Year Kiewit Construction Company</p>	<p>2003 New Construction Design Honor Award AIA Nebraska</p>
<p>Eugene Applebaum College of Pharmacy and Allied Health Professions Complex at Wayne State University <i>Detroit, MI</i> With Nuemann/Smith & Associates</p>		<p>2003 Architectural Portfolio Outstanding Buildings American School & University magazine's</p>	<p>2003 Steel Excellence Award Great Lakes Steel Fabricators and Erectors Association</p>

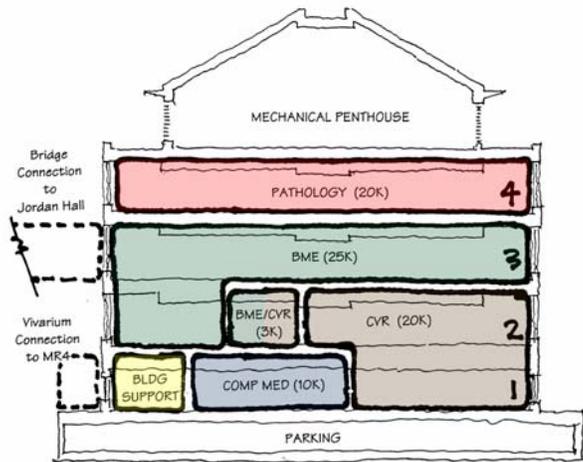
Recognition and Awards *Continued*

<p>Science Library at the University of California, Riverside <i>Riverside, CA</i> With Shepley Bulfinch Richardson and Abbott</p>		<p>2000 Education Interiors Showcase Outstanding Building in the Libraries/Media Centers Category American School & University magazine's</p>
<p>Corporate Headquarters, R&D and Manufacturing Facility at Ventana Medical Systems <i>Tucson, AZ</i></p>		<p>2003 International Best in Class Award for Industrial/Manufacturing Category Tilt-Up Concrete Association</p>
<p>Southwest Regional Laboratory for Food & Drug Administration <i>Irvine, CA</i> With Zimmer Gunsul Frasca Partnership</p>		<p>2004 R&D magazine's Lab of the Year High Honors</p>
<p>The Arts Center at Iowa Western Community College <i>Council Bluffs, IA</i></p>		<p>2002 New Construction Design Award AIA Nebraska</p> <p>2001 Honor Award AIA Central States Region</p>

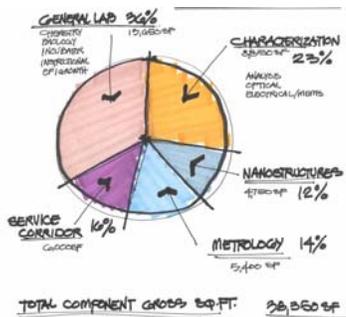
Recognition and Awards *Continued*

<p>SAP Labs <i>Palo Alto, CA</i></p>		<p>Award of Merit for Commercial Architecture AIA Northern Virginia</p>	
<p>First National Technology Center <i>Omaha, NE</i></p>		<p>Award of Excellence AIA Nebraska</p>	<p>Honor Award AIA Nebraska</p>
<p>Consolidated Education & Training Facility at US Air Force Academy <i>Colorado Springs, Colorado</i></p>		<p>Award of Excellence Design and Environmental Awards Program, US Army Corps of Engineers</p>	<p>Merit Award US Air Force</p>
<p>Missouri Service Center Department of Homelant Security <i>Lee's Summit, MO</i></p>		<p>Merit Award AIA Santa Clara Valley</p>	
<p>Nonproliferation and International Security Facility at Los Alamos National Laboratory <i>Los Alamos, NM</i></p>		<p>2003 National Award for Industrial/Process Sector Building over \$25 Million Design Build Institute of America</p>	

Laboratory Planning, Programming and Design

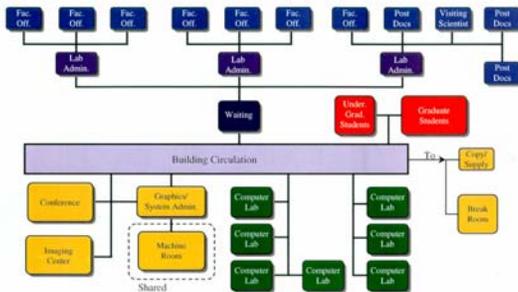


Departmental Relationships



Laboratory Space Analysis

ADJACENCY DIAGRAM



Adjacency Diagrams

HDR has focused its laboratory planning, programming and design services on scientific research and teaching spaces for institutional clients. Our staff has extensive knowledge of the numerous factors involved in facility planning, including modularity and adaptability; aesthetics, including the use of natural light in laboratories and offices; the importance of the office-to-laboratory relationships; and delivery of utility systems.

HDR's unique program bridges the boundaries from basic science research to applied research and into development and manufacturing. Our experience includes a variety of specialty environments, including the full range of biosafety environments, vivaria, scale-up facilities, and clean rooms, with many of these spaces designed to support certification as a cGMP facility or for accreditation by organizations such as AAALAC. Our experience includes not only designing to NIH, USDA and FDA guidelines, but designing laboratories for these agencies as well.

Our experience in the planning and design of facilities merging biotechnology and nanotechnology includes the design of one of the first multi-discipline nanotechnology facilities incorporating nano, semiconductor and nano-biology in the same building. Our long track record of serving the microelectronics industry, our design of nanotechnology laboratories and our extensive design experience of biotechnology facilities has combined to create a highly developed in-house level of expertise.

HDR's approach to the planning, programming and design of research space requires a thorough understanding of research itself, promotes interaction between researchers, and aspires to achieve excellence in environmental conditions for carrying out experiments. Our laboratory planners, programmers, and designers work closely with the researchers to examine their needs in order to provide them with a successful functional program. We place value on the creation of spaces that provide an opportunity for interaction among researchers, faculty, and staff, as well as on the importance of flexibility to meet tomorrow's needs. Achieving quality of life within the laboratory environment with out compromising efficiency is always at the forefront of our designs, helping institutions attract and retain top research scientists.

Most importantly, we realize the importance of creating a facility that provides a collaborative environment that is functional, flexible, safe, and aesthetically pleasing.

National Institutes of Health *Bethesda, Maryland*
Ambulatory Care Research Facility



**Project
Details**

Cost:

\$93,000,000

Square Footage:

1,235,000 SF

Responsibility:

Full AE Services

Building Components:

Biomedical Research
Laboratories, Animal
Research Facilities, Lab
Support Space, Data
LAN/WAN and
Communications, and
Hazardous Materials
Handling

HDR's 20-year relationship with the National Institutes of Health began with the Ambulatory Care Research Facility. This nationally and internationally recognized biomedical research facility serves outpatient visitors and supports clinical research and biomedical research. Laboratories and patient clinics are housed in a contemporary, 11-story glass tower, which contrasts with and reflects the existing brick structure. The highly flexible laboratory spaces meet the ever-changing functional requirements of medical research by incorporating a vertical core. This core contains the utilities and service chase, allowing quick utility disconnect and rapid rearrangement of the laboratory space without disturbing other nearby research activities.

Each tower floor has its own animal quarters and research area. An extensive animal

movement and control system was designed to effectively receive, hold, and supply animals for research. This system involves special loading docks, excretion control and waste removal system, feed supply facilities and an elevator bank dedicated exclusively to animal movement within the facility.

Three underground levels provide visitor and staff parking for 1,500 cars helping overcome severe site constraints.

National Institutes of Health *Hamilton, Montana*
 Rocky Mountain Laboratory Upgrade Program



**Project
 Details**

Cost:
 \$19,500,000

Square Footage:
 150,000 SF

Responsibility:
 Master Planning,
 Programming, Space
 Planning, Architecture,
 Interior Design

Building Components:
 Phased construction, BSL-2,
 BSL-3 laboratories, vivarium,
 library, conference center,
 offices, support areas,
 central plant

On behalf of the Rocky Mountain Laboratory, the Department of Health and Human Services contracted with our firm as Architect of Record to implement a comprehensive facility upgrade program.

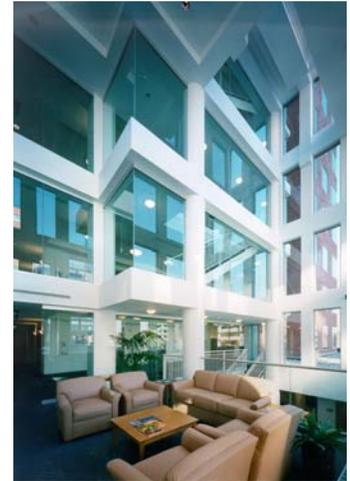
Rocky Mountain Laboratory is a 33-acre research complex with one to three-story structures ranging in age from 30 to 60 years. A portion of the complex is on the National Register of Historic Places with the United States Department of Interior. The project was organized into multiple phases spanning nearly seven years to allow the complex to continue functioning during demolition and new construction.

Program elements encompass:

- Consolidated master plan

- Site infrastructure modernization
- Building upgrades to current structural, life safety and mechanical codes
- Construction of new central utility plant, seminar room, library, glasswash, and media prep building
- Complete renovation to create generic laboratories
- Biosafety level 2 and 3 medical lab rehabilitation to current industry standards
- Animal facility support rehabilitation

Johns Hopkins University School of Medicine *Baltimore, Maryland*
Bunting-Blaustein Cancer Research Center



**Project
Details**

Cost:

\$47,000,000

Square Footage:

242,000 SF

Responsibility:

Full AE Services in assoc.
w/ZGF

Building Components:

Cancer Research
Laboratories, Vivarium, BSL-
3 Laboratory, Laboratory
Support, Offices and
Building Common Space,
and Interstitial Utility
Distribution.

HDR served as Architect of Record for the School of Medicine's Cancer Research Building. The overriding goal of the University was to provide a facility which accommodates and enhances research at the highest level. The new research laboratory building will be part of a new "front door" to the Johns Hopkins Medical Institution's Campus.

The building consists of six-lab levels with an interstitial utility distribution level between each lab floor to provide full access to the mechanical and electrical systems and allow for future adaptability. To facilitate interaction among the researchers offices are grouped at

the north and south ends of the building with shared support and building common areas.

The building complements the historic hospital buildings yet provides a more contemporary appearance. The use of brick and natural stone reinforce the collegiate campus identity and embody quality, longevity, economy, and low maintenance. The facility was design with future vertical expansion in mind.

Johns Hopkins University School of Medicine *Baltimore, Maryland*
cGMP Laboratory



**Project
Details**

Cost:

\$1,200,000

Square Footage:

1,900 SF

Responsibility:

Project Management,
Architecture, Interiors,
Planning, Casework,
Equipment Planning

Building Components:

Five class 10,000
cleanrooms, interstitial floor

HDR served as Architect of Record for the School of Medicine's Cancer Research Building. The overriding goal of the University was to provide a facility which accommodates and enhances research at the highest level. During construction the University identified a need and obtained special funding for a cGMP laboratory. HDR was direct selected to provide design services for the new laboratory facilities.

The five class 10,000 cleanrooms are located in the new Bunting-Blaustein Cancer Research Building on the second floor. The laboratory will be used for the development of vaccines

for human consumption. The building consists of six-lab levels with an interstitial utility distribution level between each lab floor to provide full access to the mechanical and electrical systems and allow for future adaptability. To facilitate interaction among the researchers, offices are grouped at the north and south ends of the building with shared support and building common areas.

Johns Hopkins University School Of Medicine *Baltimore, Maryland*
Cancer Research Building II



**Project
Details**

Cost:
\$66,000,000

Square Footage:
260,000 SF

Responsibility:
Full AE Services in assoc. w/ZGF

Building Components:
Cancer Research Laboratories,
Barrier Vivarium, BSL-3 Laboratory,
Laboratory Support, Offices and
Building Common Space, and
Interstitial Utility Distribution.

HDR served as Architect of Record for the School of Medicine's Bunting-Blaustein Cancer Research Building I. Due to the overriding success of this project, the same team was selected to design a second "twin tower" facility adjacent and connected to the first.

The 260,000 SF facility will be designed with many of the same components as in the first facility, including interstitial utility distribution, cancer research laboratories, an expanded barrier vivarium, BSL-3 laboratory space, support offices, building common space and similar exterior and interior finishes.

The connector building linking the two towers will be used as a new loading dock facility for the Southwest area of the campus as well as

for shared vivarium and lab functions. The area between the buildings will also be landscaped to create a new pedestrian mall equipped with pergolas, benches and fountains.

National Institute of Standards and Technology (NIST) *Gaithersburg, Maryland* Advanced Measurement Laboratory (AML)

Recent Recognition

Lab of the Year High Honors, *R&D Magazine's* 2005, the most prestigious recognition program for laboratory design.

2005 Building Team Project of the Year Award *Building Design & Construction* magazine Bronze special commendation.

Overall Project of the Year in *Mid-Atlantic Construction* magazine's "Best of 2004" awards.

Project of the Year award in the institutional category in *Mid-Atlantic Construction* magazine's "Best of 2004" awards.

Best New Construction – Over \$100 Million, The Associated General Contractors of Metropolitan Washington, D.C. (AGC-DC) Merit Award in 2004.

The Best Biotech Project award from the Maryland/D.C. National Association of Industrial and Office Properties (NAIOP) 2nd Annual Awards of Excellence in 2004.



Project Details

Construction Cost:
\$175,000,000

Size:
49,860 SM (536,500 SF)

Responsibility:
Full AE Services

Building Components:
State-of-the-art Research Laboratories, Instrument Labs, Class 100 Clean Rooms, Metrology Labs, Vibration and Temperature Controls, RF Shielding.

As part of their enhanced mission of supporting America's technological competitiveness, NIST required new advanced technology laboratories. Completed in December 2003, the AML has few, if any, equals among the world's research facilities. This facility offers an unprecedented combination of features designed to virtually eliminate environmental interferences that undermine research at the very tip of the leading edge of measurement science and technology.

When working at the scale of one billionth of a meter, stability in temperature is required to within $\pm 0.01^\circ$ Celsius, humidity control of less than 3 percent of RH, along with control of vibration to a velocity of less than 3 micrometers per second. No building has yet

achieved concurrent stability in temperature, vibration and power to the degree that this project does. While control of each of these environmental variables is challenging in itself, the greater challenge was to integrate all of these criteria into a single space. In order to determine if these criteria could be achieved, HDR worked closely with the manufactures' engineers and successfully built prototype modules that met and in some cases exceeded the requirements set forth.

Food and Drug Administration *Irvine, California*
 Southwest Regional Consolidated Laboratory



**Project
 Details**

Cost:
 \$34,000,000

Square Footage:
 133,500 SF

Responsibility:
 Full AE Services in JV with
 ZGF

Building Components:
 Biological and Chemistry
 Research Laboratories
 including organoleptic,
 pesticide and mass
 spectrometer center,
 microbiology, virology,
 sanitation, and
 biotechnology, Lab Support,
 Offices, BL-3 Containment
 Laboratories, and a AAALAC
 Certified Vivarium.

The Food and Drug Administration had established a paradigm shift between laboratory and administrative functions. That shift has been incorporated in the design of their new Analytical Laboratory building with modularity of both the offices and laboratories allowing initial and long-term flexibility in the use of space.

Elimination of the barriers between individual offices and between adjacent lab modules was a major goal for the planning of the laboratory and office wings. The office areas were designed to be as open as possible, while accommodating the limited number of programmatically enclosed spaces such as conference rooms and private offices which are grouped at the ends of the wings. The only barrier between office and lab is what is

required to environmentally control the laboratory.

Clear and distinct paths for circulation have been established because of the impact on the function of the office and laboratory spaces. Because of the nature of the research within the labs, it was imperative that the material and equipment circulation paths be segregated from the non-laboratory circulation.

Food and Drug Administration *College Park, Maryland*
 Harvey W. Wiley Federal Building, Center for Food Safety and Applied Nutrition



Project Details	Cost: \$66,500,000
	Square Footage: 410,000 SF
	Responsibility: Full AE Services in association with KMW
	Building Components: Research Laboratories, Radioactive and Hazardous Chemical Waste Facilities, Controlled Environment Rooms, Auditorium, Classrooms, Health and Fitness Center, Retail, and Office Space.

Commissioned under the GSA Design Excellence Program, HDR, in collaboration with KMW, designed this new facility to house offices, laboratories and laboratory support facilities for the FDA Center for Food Safety and Applied Nutrition (CFSAN) and Veterinary Medicine (CVM). These facilities act in conjunction with the recently expanded FDA facilities known as MOD I.

Included in the design of this project are a library, biomedical laboratory facilities, auditorium, teaching laboratories and classrooms, a health center, a day care center and food service facilities.

Lab support spaces include the following facilities:

- Low-level radioactive waste and hazardous chemical waste facilities
- Controlled environmental rooms
- Central energy plant
- Walk-in incubator

- Autoclave
- Sterilizer rooms

Environmental permitting services were also provided for compliance with city, county and state authorities having jurisdiction. The project was also designed in accordance with UFAS, ADAAG, OSHA, FDA, UDF and NFPA Life Safety Codes.

The project is significant in that it is the first major lab building in the FDA consolidation program in support of joint efforts with the University of Maryland, and is the first block in an urban redevelopment proposal for the College Park metropolitan area.

Creighton University *Omaha, Nebraska*
Hixson-Lied Science Building



**Project
 Details**

Cost:
 \$18,000,000

Square Footage:
 110,000 SF

Responsibility:
 Full AE Services

Building Components:
 Research and Teaching Laboratories, Lab Support Space, School and Departmental Offices and Administrative Areas, Meeting Areas, Auditorium, Classrooms, and Student Amenities.

The Hixson-Lied Science Building serves as the first phase and new “front door” to Creighton University’s integrated science complex. The 110,000 SF, six-story facility provides much-needed classroom, teaching labs and office space for the university’s science program, which includes almost half of all undergraduate enrollment.

The building objectives included

- Additional and updated classrooms, labs, and lounge and office space on a crowded urban campus
- A recruiting tool for new students
- Establish a new design standard for the campus
- Become a national template for undergraduate science education by creating interdisciplinary learning opportunities

As a result, there are numerous interactive learning areas where faculty and students can work in small groups.

Because of the lower ceiling heights required from adjoining buildings, the six-story atrium helps alleviate the “compressed” feelings of the floors, as does the reflective lighting in common areas surrounding the atrium. The view up the six-story glass atrium is inspiring; looking down to the atrium’s terrazzo floor was also designed to impress. The grand mosaic is a depiction of an atom, its “electrons” colorful medallions representing all of the university’s colleges and schools. The mosaic can be viewed from all floors.

Creighton University *Omaha, Nebraska*
Rigge/Criss Science Complex



**Project
Details**

Cost:
\$35,000,000

Square Footage:
300,000 SF

Responsibility:
Full AE Services

Building Components:
Research and Teaching
Laboratories, Lab Support
Space, School and
Departmental Offices and
Administrative Areas,
Meeting Areas, Auditorium,
Classrooms, and Student
Amenities.

Subsequent to providing comprehensive planning services, HDR was retained for the programming, planning and conceptual design of the Rigge/Criss Science Complex. HDR's design services included a complete infrastructure upgrade to three existing buildings and a new addition, as well as all new glazing and a new 16,000 SF "in-fill" addition. The renovations were laboratory-focused, containing both teaching and research labs, including two BSL-3 labs and a number of Core Labs.

A new 110,000 SF building provided swing space for the departments during the phased renovation. The completed facilities house the Schools of Medicine, Pharmacy, and Nursing, as well as the undergraduate departments of Chemistry, Biology, Physics, Environmental Science and Atmospheric Science.

Project goals included:

- A building that is flexible to changing programmatic needs
- A building that is sensitive in terms of energy costs, operations, and maintenance
- Interaction areas
- Identifiable entrance to the Science Complex and the campus itself
- A facility that enhances research funding, faculty and student recruitment and retention.

An enclosed hallway links the Hixson-Lied Science Building to the Rigge/Criss Science Buildings.

Brookhaven National Laboratory *Upton, New York*
 Center for Functional Nanomaterials



**Project
 Details**

Construction Cost:
 \$38,500,000

Size:
 85,000 SF

Responsibility:
 Full A/E Services

Building Components:
 State-of-the-art Laboratories,
 Cleanrooms (4,200 SF of
 Class 100-100,000), Office,
 Collaborative Areas, and
 Conference Spaces

HDR provided full A/E services for the Brookhaven National Laboratory's Center for Functional Nanomaterials. The new facility will provide researchers with state-of-the-art capabilities to fabricate and study nanoscale materials. The Center's focus is to achieve a basic understanding of how these materials respond when in nanoscale form.

The Brookhaven Nanocenter is one of five Nanoscale Science Research Centers proposed by the U.S. Department of Energy (DOE). The Nanocenter at Brookhaven will complement the other DOE centers, as well as coordinate with university centers supported by the National Science Foundation. These centers will greatly enhance scientists' ability to investigate the effects of nanoscale dimensions on materials' properties by providing new fabrication techniques, novel experimental probes and other research tools.

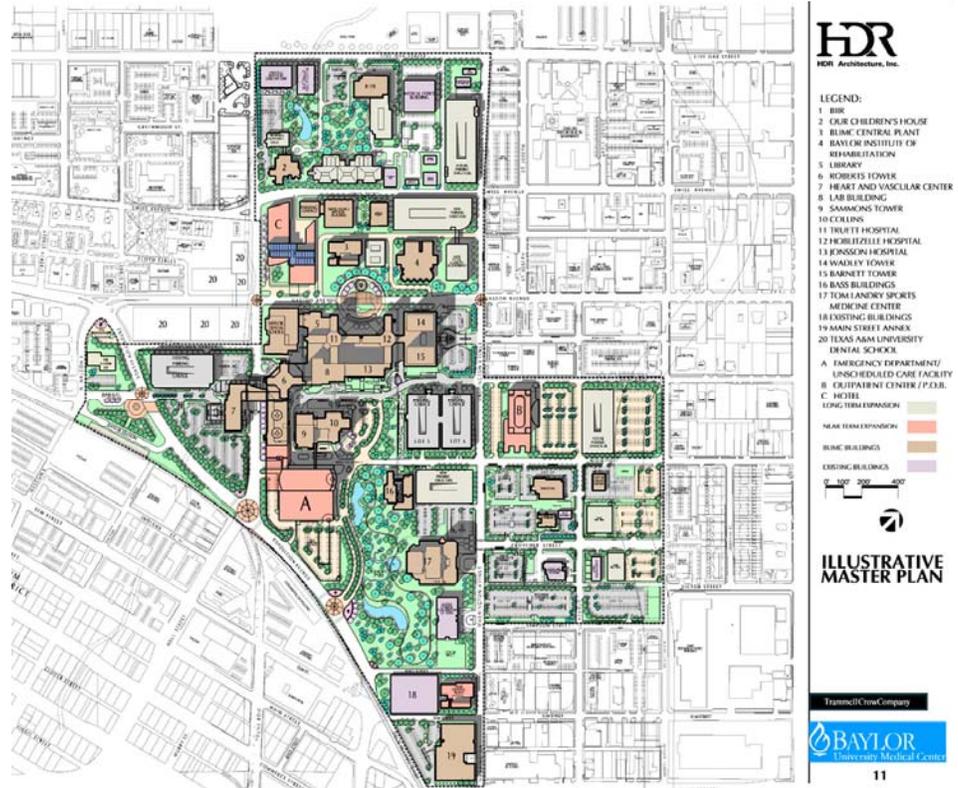
The Center for Functional Nanomaterials will be housed in a new building, containing six laboratory clusters and will provide access to beamlines at the National Synchrotron Light Source. The scientific programs will be organized into six themes:

- Strongly Correlated Oxides
- Magnetic Nanoassemblies
- Catalysis on the Nanoscale
- Charge Injection and Transport
- Nano Structure Organic Films
- Applications of Functional Nanomaterials

These applications will emphasize emerging technologies of interest to the DOE's mission goals.

This laboratory is an integral part of the National Nanotechnology Initiative and will serve as a focal point for advanced material research in the northeastern United States.

Baylor Research Institute *Dallas, Texas*
 Baylor Institute of Immunology Research



Project Details	Cost: TBD
	Square Footage: 60,000 SF
	Responsibility: Full AE Services
	Building Components: Research Laboratories and cGMP Facilities

Founded by Mr. Boone Powell, Sr. in December of 1982, Baylor Research Institute (BRI), a not-for-profit corporation, was established to sponsor and conduct research in conjunction with the Baylor University Medical Center. One of the missions of the Baylor Research Institute is to develop a research center of excellence with Baylor University's Medical Center and recognize a responsibility for participating in the development of human knowledge and understanding in the medical and health fields.

HDR is working with BRI to develop a long-range facility plan for renovations to the Baylor Institute of Immunology Research (BIIR). Through development of the facility plan HDR re-designed the cGMP Islet cell culture facility

to better fit the layout and utilization of the building space.

Additionally, HDR is assisting BRI with the necessary design documents for their NIH CO6 Grant Application for additional cGMP space, a vaccine prototype facility and fit out of additional research laboratory space.

Mayo Clinic *Rochester, Minnesota*
 Department of Laboratory Medicine and Pathology



Project Details	Cost: Confidential
	Square Footage: 300,000+ SF
	Responsibility: Programming, Strategic Planning & Design
	Building Components: Nine Business Units Research Laboratories Offices

HDR provided master planning and programming of Mayo's Clinic's national Esoteric Diagnostic Facility consisting of nine Divisions, over 40 specialty laboratories, over 300,000 SF and 1600 employees:

- Anatomic Pathology
- Hematopathology
- Clinical Microbiology
- Experimental Pathology
- Transfusion Medicine
- Clinical Core Laboratory Services
- Clinical Biochemistry and Immunology
- Laboratory Genetics
- Mayo Medical Laboratories

Situated within four buildings and occupying more than 200,000dgsf, the DLMP annually performs over 13 million billable tests and is experiencing rapid, sustained increases in esoteric test volumes. This is due in part to the increased use of molecular diagnostic testing complementing the traditional morphological and cellular analyses to form a consolidated diagnostic report for clinician use.

Virginia Commonwealth University *Richmond, Virginia*
 Medical Sciences Building



**Project
 Details**

Cost:
 \$17,500,000

Square Footage:
 123,000 SF

Responsibility:
 Full AE Services in Assoc.
 with MWCS

Building Components:
 Generic Research
 Laboratories, Related Lab
 Support and Office Space,
 Computer Lab, BL-3
 Laboratories, Classrooms,
 Auditorium, and Animal
 Facilities.

Located on a prominent downtown historic site, this 9-story research building is designed with a double-loaded racetrack corridor and a plan configuration that will allow up to 10 double modules per floor. Each floor is a mix of research laboratories, support space, and classrooms.

To promote interaction between researchers, the lab modules are symmetrically located around an equipment support spine and are divided by centrally located classrooms and conference areas. A three-story atrium provides informal gathering and interaction among researchers.

The effort to integrate the project into the campus and urban fabric resulted in a 6,000 square-foot landscaped plaza between the Medical Sciences Building and the adjoining Egyptian Building, listed on the National Register. HDR completed the project with Richmond affiliate Marcellus Wright Cox & Smith.

University of Virginia Health Sciences Center *Charlottesville, Virginia*
Biomedical Engineering and Medical Sciences Building (MR-5)



**Project
Details**

Cost:

\$33,000,000

Square Footage:

157,000 SF

Responsibility:

Full AE Services in assoc.
w/KMW

Building Components:

Modern, Flexible Wet Research
and Teaching Laboratories,
2,500 SF BSL-3 Labs, Lab
Support Space, 15,000 SF
Vivarium designed to AAALAC
guidelines, Offices and Meeting
Areas, and Classrooms.

With the goal of increasing state-of-the-art research space and collaboration among the departments of Biomedical Engineering, Pathology and Comparative Medicine, and the Cardiovascular Research Center, the University hired HDR, in association with Kallmann McKinnell & Wood, to design their new laboratory research facility.

The fundamental “building blocks” of space are accommodated in organizational concepts around a double-loaded corridor with a ghost corridor through the laboratories. This organization, coupled with a strong desire for departmental identity, resulted in adjacencies, natural light to offices, indirect or “borrowed” light to laboratories, lab to office adjacencies, and circulation strategies.

The success of the project and the design team’s responsiveness over a period of two and one-half years, led to earning the University’s trust and support and direct selection for the upcoming MR-6 project. The design team continually sought out and identified innovative solutions that would improve features in the lab designs. The generic lab space, which adapted to specialized needs, was so successful that it will be replicated in future designs for the University.

University of Virginia Health Sciences Center *Charlottesville, Virginia*
Carter-Harrison Medical Research Building (MR-6)



**Project
Details**

Cost:
\$57,000,000

Square Footage:
187,000 SF

Responsibility:
Full AE Services in assoc. w/KMW

Building Components:
Modern, Flexible Wet Research
and Teaching Laboratories,
30,000 SF Vivarium, 5 BSL-3
Labs, Lab Support Space, Offices
and Meeting Areas, and
Classrooms.

From the success of the Biomedical Engineering and Medical Science Building (MR-5) and the design team's responsiveness, the HDR Team earned the University's trust and support to the extent that the University went to the State of Virginia to request sole source design of the Medical Research Building (MR-6).

The new building is to be located at the South end of MR-5, abutting the McLeod Hall plaza. This, as well, pulls McLeod and the School of Nursing closer to the physical and academic center of Health and Sciences. This strategy better utilizes the available real estate for future development.

The architectural character of the new Medical Research Building (MR-6) will be essentially a site adapt of the Biomedical Engineering and Medical Science Building (MR-5). Like its predecessor, MR-6 must recognize and enhance the diverse character of the East Precinct and surrounding community. This ranges from the near urban density of the Health Sciences Center to the residential character of the neighborhood to the west.

This contrast in scale and activity has fostered the opportunity to create a direct and appropriate architectural alignment, utilizing current building technology and materials to achieve the imagery associated with the historical tradition of building fabric on the university.

This building will be 187,000 SF and connect at each level to MR-5. A large courtyard will be a featured design element formed by the configuration when the buildings are completed.

University of South Florida *Tampa, Florida*

Johnnie B. Byrd, Sr. Alzheimer's Center & Research Institute



**Project
Details**

Cost:

\$24,000,000

Square Footage:

100,000 SF

Responsibility:

Full AE Services

Building Components:

Research laboratories, office space, 6,500 SF Vivarium and other related components, as well as clinical evaluation areas

Plans are underway for the Johnnie B. Byrd, Sr. Alzheimer's Center and Research Institute to be built on the University of South Florida campus in Tampa. On May 24, 2002, Florida Governor Jeb Bush signed a bill that will lead to the construction of the approximately \$24 million facility. When completed, the Johnnie B. Byrd, Sr. Alzheimer's Center and Research Institute will be one of the largest freestanding institutes in the world devoted exclusively to this illness.

The proposed facility totals approximately 100,000 SF, housing research laboratories, office space, 6,500 SF Vivarium and other related components, as well as clinical evaluation areas.

The center will be operated by a non-profit corporation with an unpaid board of directors made up of representatives from several universities, doctors, the chairman of the state Board of Education and the president of the University of South Florida.

HDR has been selected to provide programming, architectural and engineering services for the project. The project is in the initial phases, with an estimated construction completion date in 2006.

USDA Agricultural Research Service *Salinas, California*
 The Agricultural Research Technology Center



**Project
 Details**

Cost:

\$37,800,000

Square Footage:

108,000 SF

Responsibility:

Full AE Services

Building Components:

Microbiology Laboratories
 Biochemistry Laboratories
 BSL 1 or 2 Laboratories
 Greenhouse & Headhouses
 Administrative Spaces
 Media Facility
 Growth Rooms
 Tissue Culture Rooms
 Darkrooms

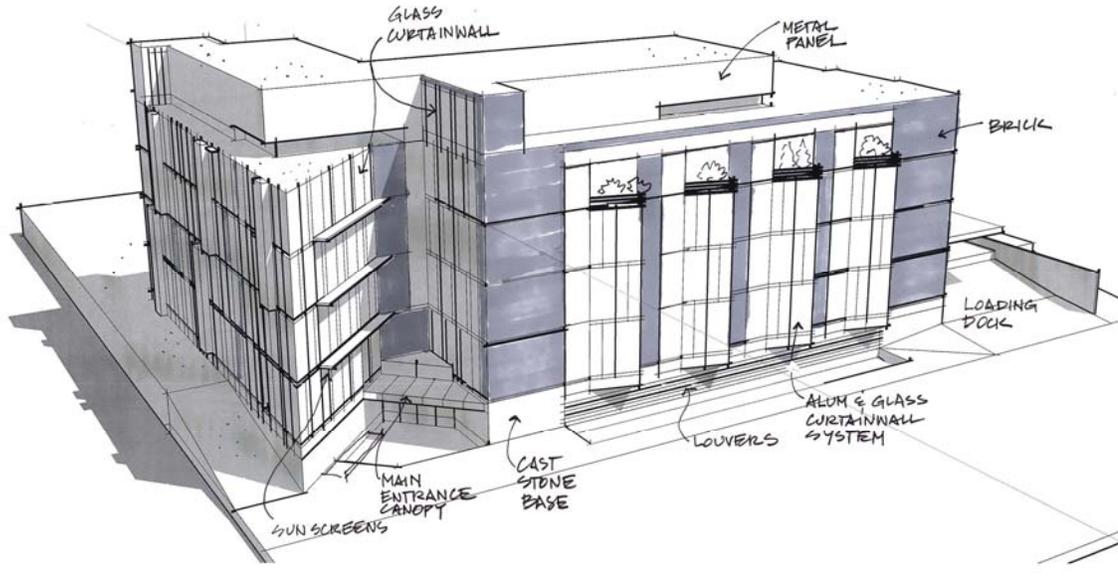
USDA Agricultural Research Service (ARS) has a strong and expanding research program in Salinas dedicated to the Crop Improvement and Protection Research to improve germplasm of lettuce, celery, spinach, melon and sugar beet.

The new ARTC will develop a strong and expanding research program in Salinas dedicated to sustainable agricultural practices and organic farming to preserve agricultural production systems and to develop management practices that will protect and preserve the sensitive marine ecosystems in the Monterey Bay.

The ARTC will be the center for research technology transfer and practical applications. The dissemination of research results and

communication of advances in agricultural science's (plant, soil, water) sustainable management practices and the interdependence of agricultural and environmental ecosystems will be essential to the acceptance and adoption of new innovative technologies and approaches. The ARTC will serve as a Center of Excellence attracting national and international scientists for collaborative research as well as training and technology transfer.

USDA, Washington State University Pullman, Washington
 Bioscience Building 2



Project Details

Cost:
\$32,500,000

Square Footage:
87,000 GSF

Responsibility:
Programming
Full AE Services

Building Components:
Administrative Spaces
Media Facility
Darkrooms
Growth Rooms
Tissue Culture Rooms
BSL-2 Laboratories
Microbiology Laboratories

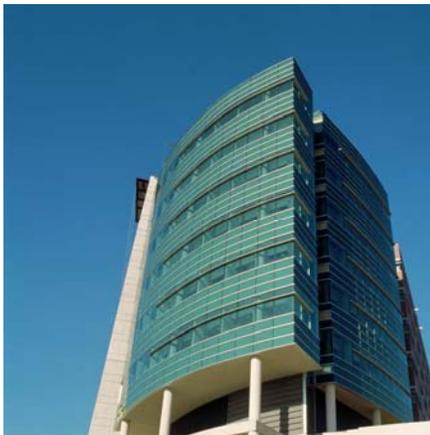
HDR is under contract to perform full architectural and engineering services and has developed the Program of Requirements (POR). This project requires the design of state-of-art BSL-2 microbiology/ biochemistry laboratories throughout the building. The project is a part of WSU's \$330 Million Research & Educational Complex Masterplan that will construct 6 new bioscience buildings by 2014.

The major scope of work is design of:

- BSL- 2 Lab modules
- Media facility, walk-in cold rooms, growth rooms, tissue culture rooms and darkrooms
- Greenhouses and headhouses facilities
- Technology transfer and administrative spaces
- One pass lab air exhaust system with negative pressure for containment throughout the building
- The structural system to meet the current seismic code

- The plumbing, fire protection, and electrical systems
- The telecommunications and physical security system
- The emergency power and standby power system
- Landscaping
- The provision for barrier free access

University of Nebraska Medical Center *Omaha, Nebraska*
 Durham Research Center



**Project
 Details**

Cost:
 \$61,000,000

Square Footage:
 289,000 SF

Responsibility:
 Full AE Services

Building Components:
 Auditorium, Conference
 Rooms, Offices,
 Classrooms,
 116 Laboratories,
 1,350 SF BSL-3 Lab and
 26,000 SF Animal Quarters.

Steady growth in research at UNMC since the early 1980's precipitated the need for new research facilities. Long recognized for their leadership in transplantation and cancer research, the research center will support and encourage growth and leadership in the additional and related fields of neuroscience and stem cell research.

The facility, through the design, promotes intellectual exchange and fosters the continued growth of research grants for these nationally and internationally recognized programs. Research activities in the state-of-the-art lab space were designed to be multidisciplinary and problem based.

The new vivarium replaced inadequate facilities that were dispersed throughout the campus and consolidated them in this location. The center provides additional animal space and has facilitated operational efficiencies in the Comparative Medicine Department. The animal facility includes holding rooms for various large and small animals with ventilated racks, a 2,300 SF transgenic suite, multiple procedure rooms and a surgery suite.

University of Nebraska Medical Center *Omaha, Nebraska*
Research Center Tower II



**Project
 Details**

Cost:
 \$59,500,000

Square Footage:
 242,000 SF

Responsibility:
 Full AE Services

Building Components:
 Research Laboratories
 Teaching Laboratories
 Offices
 Classrooms



Due to the overriding success of Durham Research Center I, HDR was direct selected to complete Full A/E Services for a 10-story, \$59.5M twin tower. The structure will be a mirror image to the Durham Research Center located at Saddle Creek Road and Emile Street.

The new research facility will include 96 assignable module research laboratories, associates offices for investigators and laboratory support space for the continued growth of funded research in the College of Medicine and the Eppley Cancer Institute, laboratory and operations of the Nebraska Public Health Lab and the University of Nebraska Center for Biosecurity,

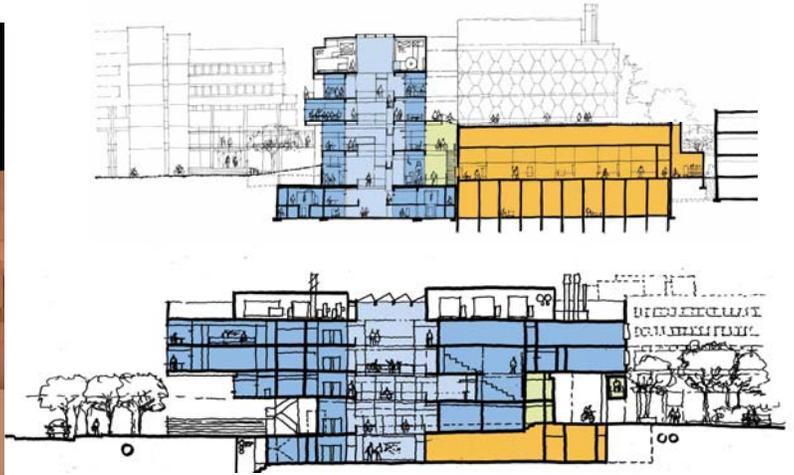
The ten floors of the new building will include four floors for general research, two floors for cancer research, two floors for bioterrorism preparedness research, one floor for utilities and one floor for research animals. The design of the research laboratories are science based

for flexible use rather than focused on requirements of specific programs.

Research activities performed in the building will be multidisciplinary and problem based, grouped around the University of Nebraska Medical Center's priority areas, including: Cancer, Cardiovascular Diseases, Biosecurity, Gastrointestinal and Liver Diseases, Developmental Biology, Genetics and Molecular Genetics, Neurobiology, and Organ Transplant Biology.

The new facility will create more opportunities to turn research findings into new businesses and new jobs in Omaha.

University of Waterloo *Waterloo, Ontario, Canada*
Quantum-Nano Centre



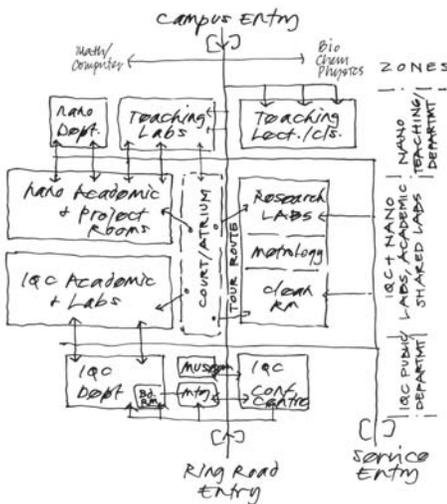
Project Details	Cost: \$56,250,000
	Square Footage: 225,000 GSF
	Responsibility: Laboratory Consultants to KPMB Architects
	Building Components: Cleanrooms Class 100 – 1000; Metrology Labs; Laboratories; Laboratory Support; Offices; Building Support Spaces

This new 225,000 GSF building for the University of Waterloo will house the Institute for Quantum Computing (IQC) and the Nanotechnology Engineering Programs. HDR's role as the primary A/E resource for technical development of the IQC and nanotechnology research portions includes primary emphasis on the interior research environment, mechanical, process, and electrical systems and the appropriate relationships of supporting spaces.

of-the-art clean fabrication lab of Class 100 and 1000 spaces, a metrology suite of labs housing advanced imaging systems including TEM's, FIB's, FE SEM's, STM, and SPM's, NMR spectroscopy, with materials analysis and characterization capabilities. In addition to these complex technical spaces, the project includes a nano-bio systems suite housing traditional life science capabilities such as cell culture, molecular biology, cell analysis and characterization.

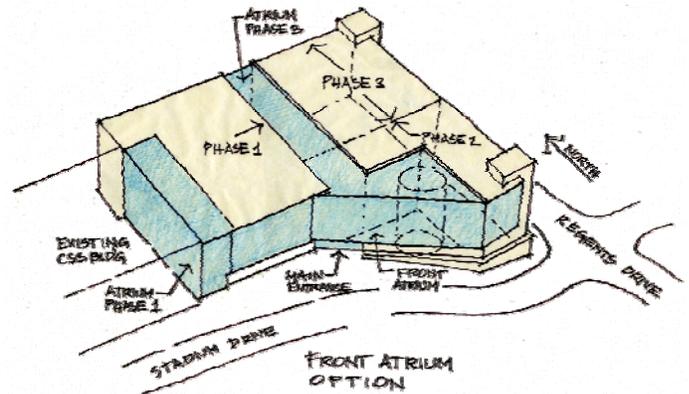
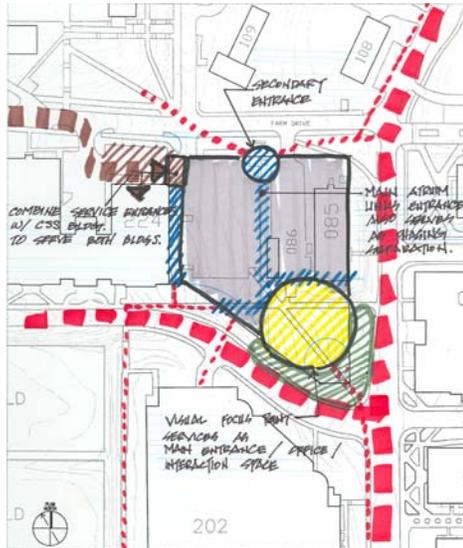
The focused research areas of the Quantum Nano Centre include quantum communications and quantum computing, using techniques such as single photon key encryption and electron spin. They also include quantum optics and photonics for optical communications development. In the computing arena, applied research will be conducted in quantum dots, super conducting qubits, and solid state implementations such as nuclear impurities in semiconductors. Basic research in quantum physics will involve superconductors and manipulation of individual atoms or ions.

The University of Waterloo's mission is to advance learning knowledge through teaching, research and scholarship in an environment of free inquiry and expression. To support this mission the new building will be designed to attract and resonate with top-flight researchers while providing a collaborative atmosphere for graduate students and faculty.



The facilities requirements to support this range of research and the nanotechnology engineering academic mission include a state-

University of Maryland College Park, Maryland
 Physical Sciences Complex Feasibility Study and Program Development



Project Details	Construction Cost: \$234,000,000
	Size: 371,000 SF
	Responsibility: Full A/E Services
	Building Components: State-of-the-Art Wet and Dry Laboratories, High Bay Labs, Conference Rooms, Multi-media Seminar Room, Office and Administration Space

In order for the University of Maryland to move forward on the development of a new Physical Sciences Complex, they needed to verify the feasibility of the site and the affordability of their desires. A team of HDR in house specialists provided a comprehensive study for a pre-selected site location. Great effort was taken to confirm the capital budget for the development of a Physical Sciences Facilities, a complex of 371,500 GSF with a predicted price tag of \$234M, each of three phases costing \$78M. The study also included confirming site characteristics that would meet stringent vibration tolerances.

The primary purpose of the initiative is to create a complex to further improve the high quality of the Department of Physics, Department of Astronomy, and the Institute of Sciences & Technology in order to maintain the competitive ranking of the University in the public research universities. The complex will be a contributor to the economic engine that the university provides to the State of Maryland.

The specific project objectives included:

- Creating a unified campus image for the Physical Sciences
- Fostering partnerships with key Federal Agencies
- Encouraging cross disciplinary collaboration
- Providing state-of-the-art labs that are flexible, modular, and adaptable

The program was developed in coordination with key faculty and staff from the College of Computer, Mathematical and Physical Sciences, the Division of Facilities Management as well as staff from other campus units.

University of Massachusetts - Lowell *Lowell, Massachusetts*
 Interdisciplinary Research Center Study



Project Details

Construction Cost:
\$60,000,000

Size:
80,000 SF

Responsibility:
Full A/E Services

Building Components:
 Optical Characterization Labs,
 Electrical Characterization
 Labs, Nanostructure
 Characterization Labs,
 Microscopy And Surface
 Analysis Labs, Computational
 Electronics Labs, Class
 1,000-10,000 Clean Rooms,
 "Wet" Chemistry Labs,
 Materials Processing Labs,
 General Labs , High-Bay (Min.
 15') And Clear Bay (Min. 30')
 Manufacturing Space, Office,
 Meeting, Classroom and
 Support Facilities

HDR has been selected by the University of Massachusetts Building Authority (UMBA) for Programming and Site Selection Services for a new facility to house the Interdisciplinary Research Center for the University of Massachusetts Lowell (UML).

The new Interdisciplinary Research Center (IRC) will focus on the development of manufacturing techniques in advanced technologies. Combining expertise in nanomanufacturing, biomanufacturing, bioinformatics, toxics use reduction, and environmental and workplace safety into a single research center will place UML at the forefront of manufacturing research and technology.

The concept for the new research facility uses a model that is responsive to immediate needs and is capable of accommodating future demands. Strategic use of open-lab formats are intended to facilitate interaction among researchers and promote interdisciplinary innovation. In order to maximize flexibility, the new facility will utilize equipment zones, mobile casework, flexible partitions and overhead

service carriers. Services and utilities will likely be located in interstitial space between floors, allowing for drop down services with easy connects/disconnects at walls and ceilings for fast and affordable hook-ups for new configurations.

The HDR Team will evaluate at least four potential sites as well as the development of a Facility Program. Time is of the essence in this project as site evaluation, recommendations and facility programming shall be completed within 120 working days. HDR will work with UMBA to determine the physical requirements of the new facility including the building and site/parking requirements.

Purdue University *West Lafayette, Indiana*
 Birck Nanotechnology Research Center



**Project
 Details**

Construction Cost:
 \$47,000,000

Size:
 220,000 GSF

Responsibility:
 Full AE Services

Building Components:
 Class 10 – 1000
 Cleanrooms, Semiconductor
 and Molecular Cleanrooms,
 Nanostructures Laboratories,
 Electron Microscopy Suites,
 Biology and Chemistry
 Laboratories, Nanotechnology
 Incubator, Chiller Plant,
 Conference Rooms, Multi-
 media Seminar Room, Office
 and Administration Space

HDR provided full architectural and engineering services for the programming, planning, design and construction of Purdue University's state-of-the-art Birck Nanotechnology Research Center.

The facility, completed in the fall of 2005, provides approximately 220,000 gross square feet of interactive, interdisciplinary laboratory, cleanroom, office, teaching laboratories and seminar space to pursue research in nanoscale applications.

Programs involve undergraduate teaching, graduate research and technology transfer initiatives with industry partners. The facility is a part of the School of Electrical and Computational Engineering. The Schools of Biology, Chemistry, Physics and other engineering disciplines will participate in research efforts. The Nanotechnology Center is the first of its kind in the state of Indiana, and will establish Purdue as national leader in nanoscale research.

Research programs for the facility include:

- Biomedical Acoustics
- Molecular Beam Epitaxy
- Modern Optics Research
- Photoluminescence and Hall Effect Characterization
- Silicon and Silicon Carbide Epigrowth
- Solid State Devices and Materials
- Ultrafast Optics and Fiber Communications
- VLSI Integrated Circuit Design
- Robotics

Wayne State University *Detroit, Michigan*
 Eugene Applebaum College of Pharmacy and Health Sciences



**Project
 Details**

Cost:
 \$51,200,000

Square Footage:
 275,000 SF

Responsibility:
 Project Management,
 Laboratory Planning &
 Programming, Equipment
 Planning, Interior Design and
 Furniture

Building Components:
 Teaching and Research
 Laboratories, Approximately
 2,000 SF BSL-3 Labs, Multi-
 media Classrooms, Related
 Lab Support and Office
 spaces, Animal Facilities,
 Student Amenities, Library
 and Pharmacy Museum.

This state-funded project had a fixed budget of \$51 million. When estimates for the preliminary design prepared by another architect came in at \$15 million over budget, HDR and Neumann/Smith were selected to provide a scope optimization and value engineering analysis to achieve the University's program goals. Subsequently our team reprogrammed and completely redesigned 270,000 SF of new construction.

Located on the urban Detroit Medical Center campus the building is primarily brick and cast stone to compliment the surrounding buildings and houses teaching and research laboratories, multi-media classrooms, offices,

animal facilities, student amenities, and the College's library and museum.

The building is comprised of modular blocks of open laboratories with adjacent support and office areas. The lab layout places laboratories to one exterior wall and the offices to the opposite exterior wall providing natural light to both. Classrooms are equipped for closed circuit broadcasts and have the capability for Interactive Distance Learning.



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