SYNCHRONICITY

DESIGN

SCIENCE AND TECHNOLOGY

Offering Efficient Designs And Holistic Solutions For The Science, Function And Operation Of Your High-Performance Space.

STRANG

SYNCHRONICITY

DESIGN

OVERVIEW

We believe (more than ever) that an integrated, in-house protocol is the intelligent pathway to successful science and technology projects. Why? The fact remains, in any project, from modest-scaled renovations to new research buildings, there are plenty of moving parts, which too often spin-off on their own with negligible regard for consequences to the entire project. When our architects, engineers and interior designers collaborate, the results can be spectacular. We implement intelligent, well-planned designs that address lab regulations and desired efficiencies. We work closely with consultants and contractors to accomplish projects within budgets and schedule parameters. This means everyone on the team is collectively dialed-into your project, evaluating – in real-time – how decisions will impact every aspect.

Our Proactive Collaboration Begins With Clients And Fully Engages Our Contractor(s) And Trades Team.

Within Strang exists an instinctive respect for client collaboration. Together, we forge an authentic coalition as our informed business model. Our clients have well-thought viewpoints and project perspectives which help shape integrated thinking across the entire team. When melded with Strang's insights, resourcefulness and expertise, together we create a course of action towards optimal outcomes.

cGMP Assay Lab

SYNCHRONICITY

DESIGN

Flexible Laboratory Space

We are privileged to design high performance spaces from research and quality testing labs to small-scale production facilities. Much like our designs, our designers consider the functional adjacencies, operational flows and industry standards to create a built environment reflecting your needs, preferences, and brand. After all, it's your facility.

Budgets, Schedules And Data Must Coexist With Creativity, Resourcefulness And Ingenuity.

A PARTNER
YOU CAN DEPEND ON

Aptitude, Attitude And Approach – You can't select two, you need all three. The reason is, skill without perseverance is wasted talent. You can't do without "Can Do." And a viewpoint without a plan is simply bravado.

Design Synchronicity is as much a mindset as it is a project management protocol. It's tenacity, confidence, servant leadership, and a common drive to excel beyond expectations.

Just as efficiency and exactness are critical in science labs, the design of your facility must be a well-thought and carefully planned process. With our clients, we are a consortium of aligned skill sets, powerful on their own, unassailable as one. Join us.

STRANG

VETERINARY DIAGNOSTIC LABORATORY

IOWA STATE UNIVERSITY

> *"The Veterinary Diagnostic Laboratory is a crown jewel for Iowa State University and for the entire state of Iowa,"said Iowa State University President Wendy Wintersteen.*

The new 90,000 SF state-of-the-art VDL will provide essential infrastructure for sample receiving and processing, pathology, bacteriology, necropsy, histopathology and an incinerator. The new construction will improve efficiency and effectiveness of the process flow while addressing critical issues of space quantity and quality and provide the necessary biosafety and biocontianment. Specialized laboratory spaces were designed with a flexible layout concept. This will allow the labs to quickly adapt to changing user needs and/or research goals.

STRANG

EUROFINS FOOD SOLUTIONS

MADISON, WI

Eurofins, is a leading international group of laboratories providing a range of testing and support services for the food, feed, and pharmaceutical industries.

A 108,000 SF, $39M, high-throughput, analytical laboratory, Eurofins operates three shifts, seven days a week to meet customer demands. Efficiencies have been designed into every aspect of the project; from sample receipt, prep, analysis, data review and publication to their clients.

The new building includes two main chemistry labs over 10,000 SF each with 20 to 24, 6 foot fume hoods each. Final analysis was completed in three equipment rooms supporting 215 analytical instruments along 450 linear feet of utility core. Detailed coordination of mechanical ductwork for both the dense use of hoods and instrumentation, heavy electrical loads throughout, and specialty gases drove much of the detailed design effort. Strang worked with local authorities to have the project permitted and construction started within four months of starting the design process.

STRANG

NIMBLE THERAPEUTICS

MADISON, WI

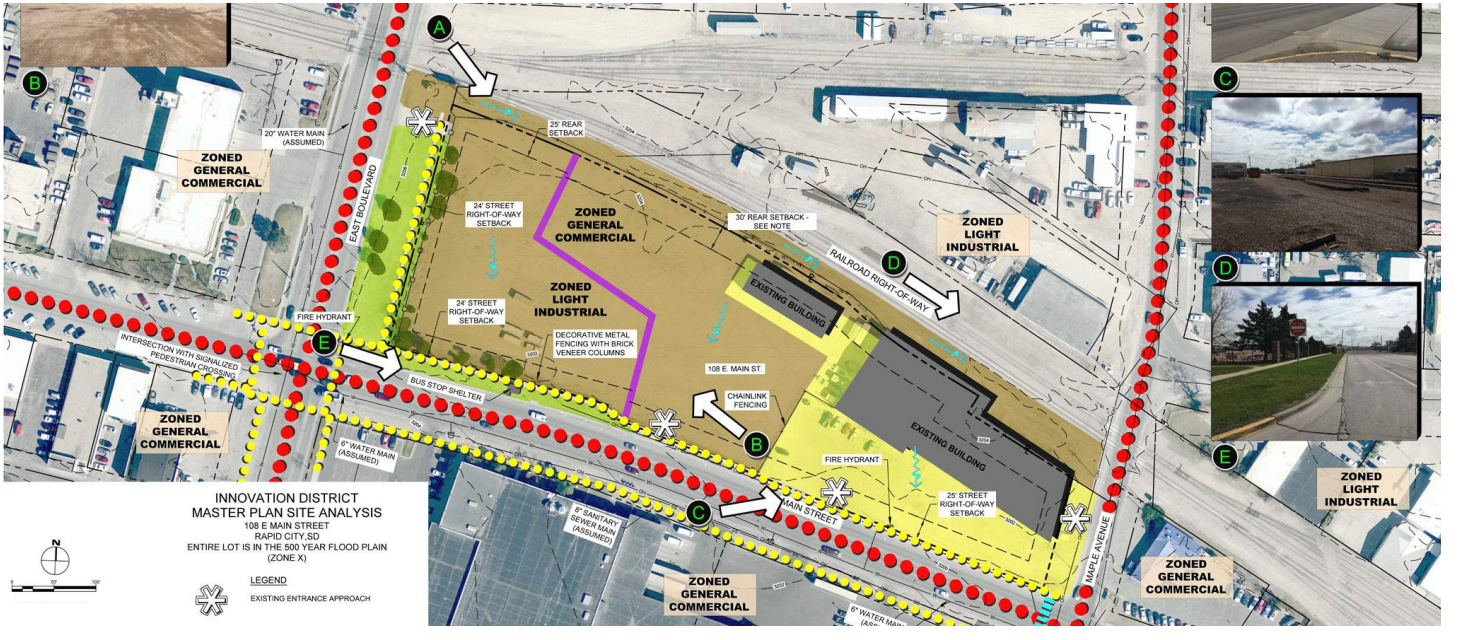
Nimble Therapeutics is a biotechnology company provides key support for all phases of pre-clinical development. They partnered with Strang on their 8,500 SF laboratory and office relocation.

Attention to detail and scheduling were critical components to the project's success. With custom, expensive equipment used in their research minimum downtime was imperative. Our engineers had to fully understand how this equipment functioned and implement the design of systems in the space. The team assessed how Nimble's new space would function and proceeded to design the best solution for the space.

Our lab planner became intimately with this project from day one, understanding the specialty equipment in order to develop the space successfully.

RAPID CITY INNOVATION DISTRICT MASTER PLAN

RAPID CITY, SD



Strang produced a feasibility study and master plan to the Rapid City Innovation District. This district was underutilized and is strategically located between Downtown Rapid City and the South Dakota School of Mines and Technology (SDSMT).

Strang worked with local business development groups to identify the most appropriate sites for an innovation district by identifying areas that would support continued growth for many decades, and areas that would tap into the pent-up demand for innovative places that enable Rapid City to attract and retain the best and the brightest. The cumlination of this master plan was the creation of the Ascent Innovation Campus.

STRANG

ASCENT INNOVATION CAMPUS

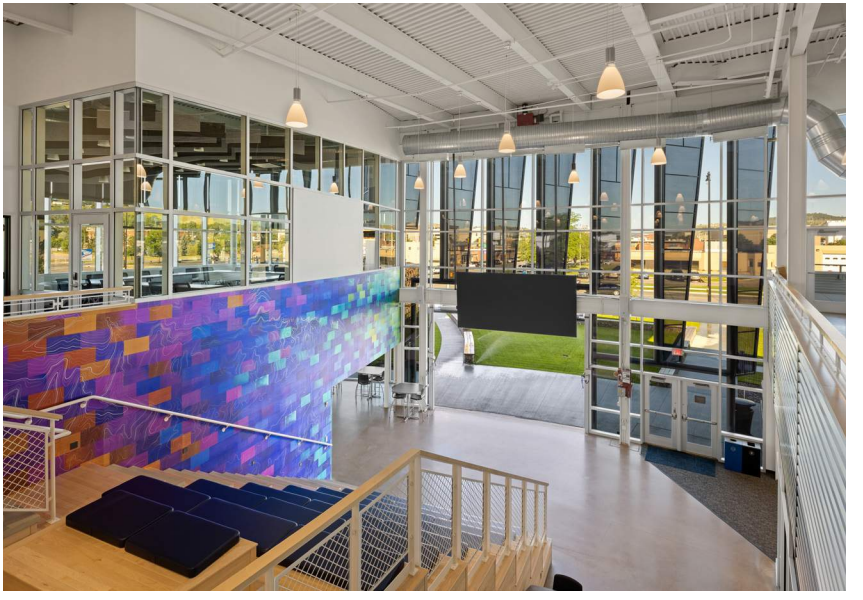
RAPID CITY, SD

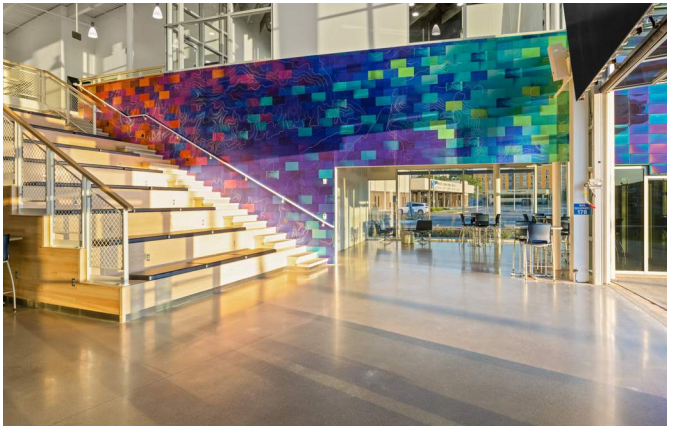
The Ascent Innovation Campus is strategically located, in the heart of a newly-created zoning district meant to foster new business development and innovation. This focal point of the campus is an exciting new business incubator and accelerator for start-ups named the David Lust Accelerator Building (DLAB), exemplifies the rising trend of public and private partnerships with multiple stakeholders.

This project is a cornerstone for future development and job creation in the Black Hills region.

We designed the 40,000 SF DLAB from the ground up around a proven structural bay module that easily accommodates uses ranging from private offices, to high-performing wet labs. All tenant spaces are designed as column-free spaces further enhancing the flexibility to subdivide these spaces as needed.

Designing for infinite flexibility means infinite cost, we defined a reasonable baseline, and recommendations to supplement systems in the future as needed depending on specialized uses.





The DLAB is more than just a space to work. It's an invitation to join a community of small business owners, entrepreneurs, students, freelancers, and city residents dedicated to bringing their ideas to life in Rapid City. The DLAB is an engine for economic development and a catalyst for transformation.

STRANG

MG&E INNOVATION CENTER

UNIVERSITY RESEARCH PARK, MADISON, WI

In response to increasing space needs from Dane County's rapidly growing and changing high-technology industry, Strang designed the 113,000-SF Innovation Center in University Research Park. The facility houses numerous small companies specializing in research and development activities, including gene therapy, software development, cancer/AIDS research and drug development. Modular laboratories were designed to accommodate a chemical fume hood, acid waste and the lab tenants' specialized equipment.

"One Of Ten Technology Incubators Changing The World."

-Forbes Magazine

WISCONSIN VETERINARY DIAGNOSTIC LABORATORY

MADISON, WI

This 82,000-SF, $18.5 million, Wisconsin Veterinary Diagnostic Laboratory provides testing services for regulatory monitoring and surveillance and diagnostic testing and evaluation for the state's practicing veterinarians. Facility components in the three-story facility include extensive diagnostic laboratory spaces, administrative offices, necropsy, conference spaces and laboratory support.

The Diagnostic Laboratory Includes Chemistry, Bacteriology, Serology, Virology, Aquatics And Biosafety Level-3 Functions.

STRANG

DESIGN

CONFIDENTIAL CLIENT
NATIONWIDE

During the last decade, Strang has provided this confidential client integrated design services to remodel office, laboratory and laboratory support space for projects exceeding $60 million in aggregate construction cost across five sites.

The majority of these projects implemented a process in which the architect, owner and contractor formed an integrated team to design and deliver complex phased projects.

Strang's Partnership With This Client (Over The Past 7 Years) Is Representative Of Many Long-Term Relationships Within Our Firm.

MENTOR BIOLOGICS

MADISON, WI

This laboratory/office was the first LEED certified laboratory production facility in Wisconsin.

In 2008, Mentor Corporation, a leading supplier of products for the aesthetic medicine market, completed a 37,000-SF manufacturing and research facility. Throughout the building a sense of transparency was achieved to maximize views and daylighting. In the lobby, a custom floor pattern provides warmth to the cool and calm color palette. On the second floor, a bridge connects the manufacturing facilities and conferencing spaces.

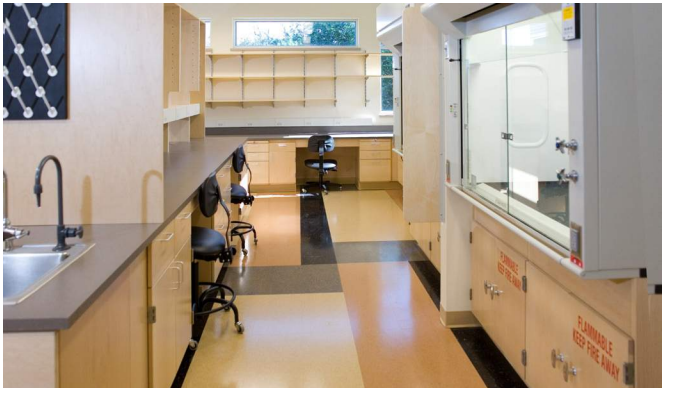
STRANG

DESIGN

HEALTH-EMOTIONS RESEARCH INSTITUTE

UNIVERSITY OF WISCONSIN, MADISON, WI

This interdisciplinary institute focuses on the study of emotions and how they affect both physical and mental health, along with sleep disorders. One design objective for this project was the creation of a contemporary and comfortable atmosphere veering away from the stark, barren feeling of a traditional institutional environment. This was successfully achieved through the use of a warm, earthy color palette and natural materials enhanced by an abundance of natural light flowing throughout the facility.



The 42,740-SF Addition Includes A Vivarium, Magnetic Resonance Imaging (MRI) Suite, Labs, Exploratory Classrooms, Subject Test Rooms, Sleep Study Rooms, Observation, Exam And Conference Rooms With Support Spaces.

DESIGN SYNCHRONICITY

Integration Of Thought Leadership Empowers All Of Us At Strang To Achieve Beyond Your Expectations. How? We Are Structured To Coalesce Our Collective Counsel Behind Client Input And An Acutely Focused Project Vision.

STRANG

DESIGN

CONFIDENTIAL CLIENT PLANT EXPANSION

WI

Strang was commissioned to provide architectural and engineering services for a 48,000-SF expansion to this medical devices manufacturing site. The program included new locker rooms on the south side of the building, a 2,500-SF new lobby addition and a 2,600-SF conference room which doubles as a tornado shelter. The production facility includes ISO 7 and 8 clean rooms.

CONFIDENTIAL CLIENT cGMP ASSAY LAB

WI

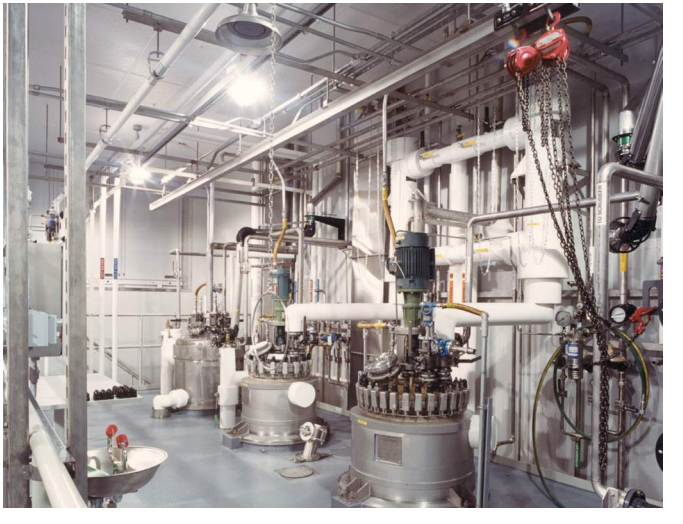
A global leader in contract research providing drug discovery, development and life-cycle management services sought Strang's design counsel for the expansion of their cGMP assay laboratory. This facility will help meet the growing needs of clients seeking to validate bioassays for product release and stability testing.

STRANG

SAFC PHARMA (FORMERLY TETRIONICS)

MADISON, WI

When Tetrionics, a rapidly growing pharmaceutical outsourcing company, gained FDA approval to produce a new drug, the company selected Strang to plan a new facility to meet rigorous drug manufacturing regulations. The 25,000-SF headquarters was designed and constructed within 12 months, and provides more than ten times as much office, laboratory and production space as Tetrionics' previous suite.



PROMEGA BIOPHARMACEUTICAL TECHNOLOGY CENTER

MADISON, WI

The BioPharmaceutical Technology Center is a state-of-the-art facility designed to meet the expanding office, manufacturing, research and development needs of Promega Corporation.

The facility meets FDA Good Manufacturing Practices and ISO 9000 design criteria. Laboratories accommodate various production methods including protein refolding, large-scale cell biology, organic synthesis and electromagnetic separations.

The Center is one of the first of its kind in the U.S. to allow contract manufacturing of biological products

STRANG

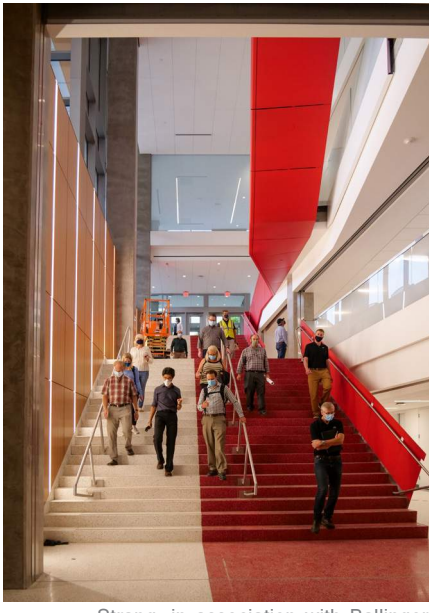
CHEMISTRY BUILDING

UNIVERSITY OF WISCONSIN, MADISON, WI

An eight-story 188,000-SF addition and 45,000-SF renovation to the Chemistry Building on the University of Wisconsin campus is a huge undertaking that brings this vital educational facility up to date. The $100 million project serves approximately 7,000 undergraduates each semester and is an important part of this world-class research institution. New and remodeled space will house lecture halls, active learning classrooms, offices and instructional labs for undergraduate general, organic, inorganic, physical and analytical chemistry.

Strang, in association with Ballinger

DESIGN SYNCHRONICITY



Strang, in association with Ballinger

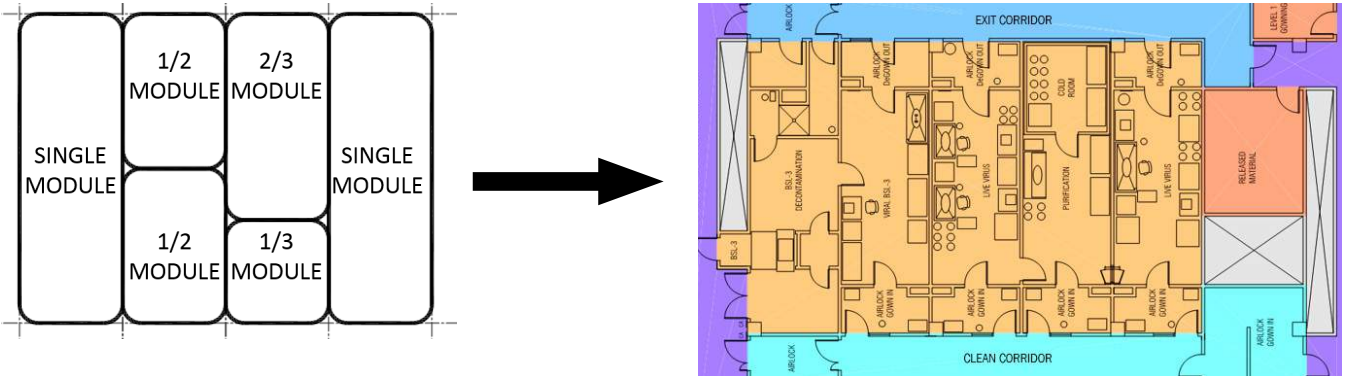
The Project Will Feature Renovated General Chemistry Labs, New And Renovated Organic And Analytical Chemistry Labs, And Transform The Chemistry Library Into An Information Commons.

STRANG

DESIGN

LABORATORY DESIGN PROCESS

Laboratory planning and design is a reiterative process involving learning, teaching, assimilation and options development. Each step involves all four activities, digging deeper and refining the options through each phase. Our design team collects information about the function and other programmatic needs such as number of employees, type and size of equipment and interaction between groups and spaces.



Each subset of the lab is developed as a single module. We independently finalize the details for each module. Then we design the relationship between those modules, creating an overall floor plan.

LISTEN

Great design will engage all your senses. At Strang, the sound of your voice is important as we listen for intensions to determine the thinking behind your words. Together, we will develop a concept matching your organization's unique objectives.

DISCOVER

When our designers work together to collect, review and analyze your input, we discover the many unique opportunities inherent in your project. This evaluative step challenges thinking and allows "Next Practices" to rise to the surface.

DESIGN

In our design phase, we uncover the ideas and insights that coalesce clients, architects, engineers and designers around a unified plan of action. As we steward your vision and culture, you are engaged as a co-creator, resulting in a design that perfectly fits your budget, schedule and mission.

Our Role Extends Beyond Traditional Designing. We Become Proactive Catalysts For Your Growth, Stewards Of Your Business And Champions Of Your Brand.

STRANG

LABORATORY SPACE DEVELOPMENT

There are many factors that go into designing high performance spaces. Our designers consider the science, functional adjacencies, operational flows, building codes, equiment, industry standards and client preferences. Labs may be research, development, in-process testing, quality control or small scale production.

No two labs are the same. However the approach to defining your needs, documenting requirements and developing holistic solutions is consistent for all of clients.

Laboratory and Write-up Room

REGULATORY COMPLIANCE

Regulatory requirements, codes and industry standards are ever-changing and influencing laboratory design solutions. Many questions must be addressed. Does the lab need to comply with FDA, USDA, etc. standards? Is the laboratory a GLP or GMP (Good Laboratory Practice or Good Manufacturing Practice) space? Are there bio-safety levels and ISO standards that apply?

These are questions our designers ask and implement early in the programming and planning process to assure optimal project outcomes.

Flexible Dance Floor Laboratory

EQUIPMENT AND SPACE FLEXIBILITY

The days of manual labor procedures in the lab are falling to the wayside. Equipment is now automating the work previously being done by the Lab Tech. Understanding the type of equipment will drive design solutions. Flexible planning integrates the ability of benching, finishes, HVAC and power systems to support the long-term viability of these laboratory spaces.

With Changing Technology And Equipment In The Lab, The Facility And Support Systems Must Be Adaptable To Changes In Science And Client Focus.

STRANG

MEP AND LAB DESIGN

Laboratory programming and planning integrates environmental requirements very early in the process. Understanding of temperature, humidity and pressure differentials are critical. MEP systems simultaneously influence and respond to the planning process.

MEP parameters also influence space requirements. Early planning considerations may include hood and biological safety cabinet (BSC) placement to minimize air flow disturbances. Air filtration, water quality and lighting levels and controls are all considered early in the process. Mechanical systems need to consider how different variables impact the performance of the laboratory and could also impact the outcome of the research or product development. Air filtration and cleanliness may be of great

Lab Planners And Engineers Work Closely Together Very Early To Assure Planning, Systems Selection And Budgets Align With The Project Requirements And Goals.

importance where clean-room standards are required. The impact of biological safety standards will dictate lab pressure requirements and how the spaces perform.

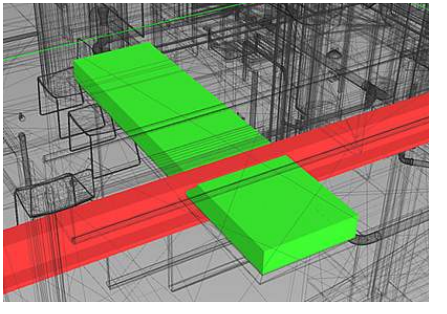
Electrical systems are primarily impacted by the lab equipment and specialized lighting in some spaces. Emergency/Stand-by power is more prevalent for laboratory/ science-based projects. Power loss could impact thousands of dollars of product or research. Determining whether the project requires "clean power," isolated power, UPS, special grounding, unique voltages, etc., is paramount. Technology is routinely integrated in the building to support operations. Card access security, specialized data cabling, A/V systems, lighting controls and building automation controls are some of the systems being incorporated.

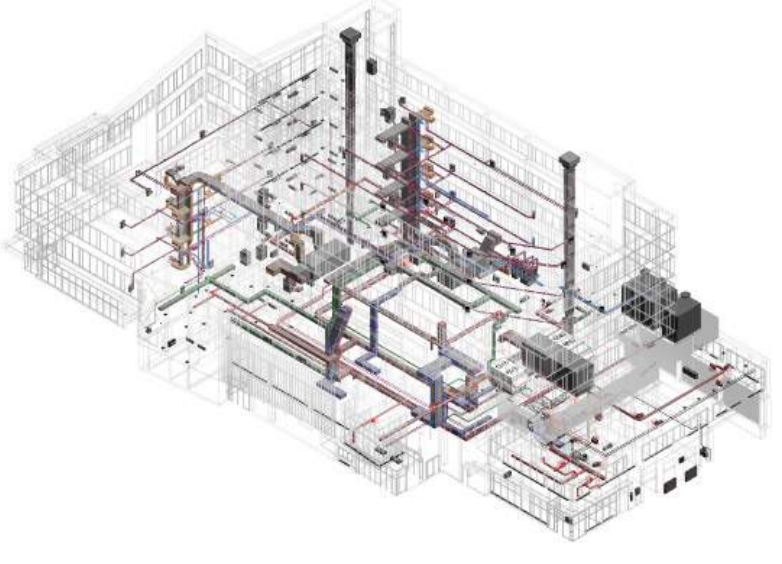
For plumbing systems, water quality may be a driver for a specific project. The project may require highly purified water for laboratory procedures and processes. Understanding effluent requirements becomes important for treating lab waste.

Evaluating energy use is critical in lab design. Laboratories utilize 10-12 times more energy than a typical office building. Therefore, our design team also investigates the importance of environmental considerations, energy consumption, building enclosure and controls through the process of energy modeling to determine solutions that will reduce the building's overall operating expenses.

ADVANCED COORDINATION

Strang has mastered the art and science of Building Information Modeling (BIM) integration. As our primary design tool, we perform BIM modeling at the start of every project. As your model takes form, it is used as a visualization tool, allowing the team to view inside any room to get a sense for proportions, scale, and the visual impact of design options creating a synchronized client experience.





In later design phases, the model is used as a coordination tool between disciplines. We use Navisworks software to run “Clash Detection” tests. These conflicts are then resolved in the model prior to construction avoiding costly change orders and schedule delays.

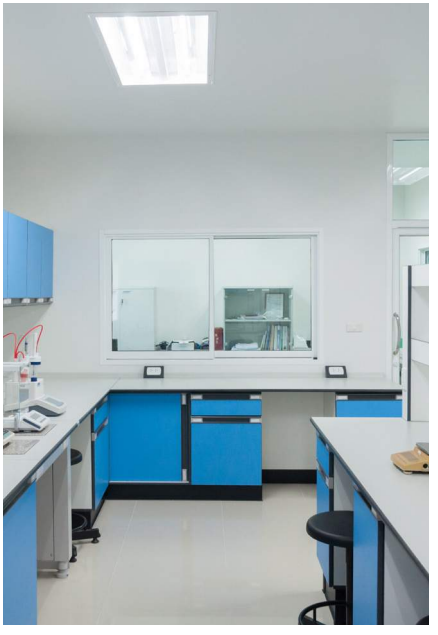
DESIGN VISUALIZATION

VR also facilitates a coordinated design solution. Our designers will use the tool to confirm the building design components "fit" together for a cohesive design solution.

Virtual reality is more than a cool new way to see architectural renderings in 3-D. At Strang, we don't use technology for technology's sake, but rather as another means to bring our client's perspective into the design process. By directing their own view from room to room, clients use the VR headsets to find out if the space "feels" right. This helps assure designers and clients are on the same page so adjustments can be made earlier and more accurately. It saves time, money and ensures a successful project.

STRANG

DESIGN



INTEGRATED DESIGN SERVICE

At Strang, we have a simple credo: architecture must inspire, enable and celebrate the human spirit; it places you in a built environment that is both a pleasure to view and occupy. Also, our designs account for respectful use of financial, natural, and human resources.

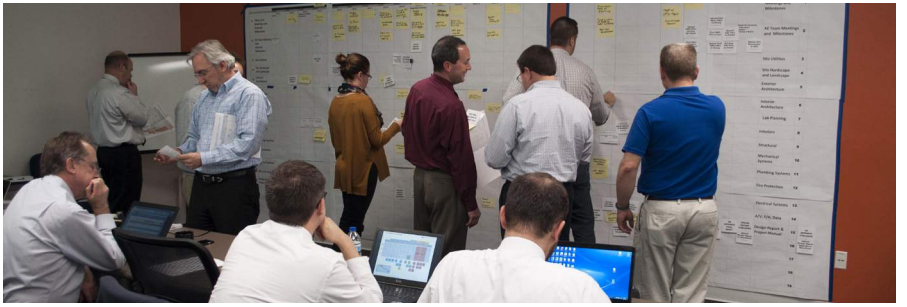
Experience in laboratory design teaches us that even minor changes require precisely aligned planning from our entire team. Our architects, interior designers and engineers work in concert with one another – and with you – in defining a unified approach for your space. It all combines to deliver a well-functioning facility of which you'll feel came from a truly collaborative process.

Strang architects are adept at designing built environments that celebrate growth. We build upon your vision with a forward-thinking mentality anticipating tomorrow's needs.

Our interior design team aligns your productivity, culture and creative energy within beautifully functional space empowering your staff, to do their best work.

Our diverse team of engineers develop comprehensive analysis and innovative solutions for your energy needs. We give you choices; you decide on the value of the return-on-investments.

DESIGN SYNCHRONICITY



ARCHITECTURE

- Master Planning
- Site Evaluation/Selection
- Architectural Design
- Feasibility Study
- Construction Administration
- Existing Building Evaluation
- Cost Estimating
- Value Analysis
- LEED Consulting
- WELL Building Consulting
- Virtual Reality (VR) Design
- Lab Planning
- Industrial Design
- Branding

ENGINEERING

- HVAC System Design
- Plumbing Design
- Electrical System Design
- Lighting Design
- Commissioning
- Integrated Control Systems
- Energy Performance Modeling
- Safety and Fire Protection
- Maintenance Programs
- Site, Civil Engineering
- Mechanical Systems Analysis
- Cost Estimating
- Start-Up Assistance
- Long-Range Programming
- Voice, Data, Security, AV Design
- Structural Engineering

INTERIOR DESIGN

- Furniture Selection/Procurement
- Colors, Finishes Selection
- Interior Architecture Detailing
- Building, ADA Code Compliance
- Selection of Art and Accessories
- Renovation Planning, Budgeting
- Development and Programming
- Ergonomic Assessments
- Branding

STRANG

Our Designs Celebrate Imagination And Nurture Creativity In Support Of Your Vision And Built Environment.

That is why we strive to provide an exceptional client experience through mutual respect, resource preservation and inspired design.

After all, every project we touch is forever a part of our shared legacy.

STRANG

MADISON REGIONAL OFFICE
811 EAST WASHINGTON AVENUE
MADISON, WI 53703
608.276.9200
WWW.STRANG-INC.COM

MILWAUKEE REGIONAL OFFICE
W238N1610 BUSSE ROAD, SUITE 102
WAUKESHA, WI 53188
262.875.6760
WWW.STRANG-INC.COM