

Facility Engineering Services

Statement of Qualifications



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Facility Engineering Services

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Facility Engineering Services

Introduction

Facility Engineering Services is a design specialist providing quality and cost effective consulting engineering and related professional services to owners, manufacturers, and contractors with a focus on industrial processing facilities for the Biofuels, Food Process, Bulk Storage, and Agricultural Processing Industries. As part of our comprehensive services, we offer a complete range of planning, plant layout, structural, and buildings system engineering along with process and mechanical engineering for our clients.

We pride ourselves on our ability to understand our client's needs. Many of our team members have worked in the industries that they serve. Our service begins with an understanding of the needs of the client and the process they perform at their facility. Once we understand your needs, we work to develop a solution that fits your needs.

The difference between *Facility Engineering Services* and other engineering firms is that we take a comprehensive approach to our engineering designs to better serve our clients. The "comprehensive" approach involves integrating traditional engineering disciplines to focus on how the facility and/or process works as a whole. We believe that by utilizing this approach that we can achieve better results for our clients. Our interactive process and overall teaming approach includes all parties involved in project development.

Comprehensive Engineering Advantage

Today's bioprocessing, biofuels and food facilities are complex entities requiring a new integrated approach to engineering design. As technology improves, the importance of facility and processes integration will grow. Infrastructure for growth, storage, handling and processing of agricultural commodities is comprised of many complex systems including: unique facilities for growth of plants and animals, equipment for loading and unloading from truck, rail, and ship; storage structures of all types and sizes; sophisticated handling and processing equipment; and special facilities for housing/protection of this equipment. These systems must be designed, built and operated by engineers who are familiar with the unique codes, regulations and design specifications applicable to agri-industrial facilities. For example, in addition to the safety and building codes to which all industries must abide, agricultural and agri-industries in the United States are subject to numerous USDA and FDA regulations under Titles 9 and 21 of the Code of Federal Regulations. These regulations help ensure a safe food supply through control of indoor air quality, sanitation practices, waste management and bio-security

For many commercial and industrial facilities, the physical plant (i.e., buildings and their mechanical systems) can be designed and built without knowledge of the manufacturing process/business that will operate within the facility. This is seldom true

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with an agricultural or agri-industrial facility. In virtually all cases, the building shell(s) and associated HVAC systems are just as integral to the processing system as the processing equipment. This is illustrated with the following points.

- HVAC equipment (e.g., boilers, chillers, air handlers, refrigeration) capacity must generally be increased significantly to handle demands of agri-industrial processing equipment.
- Processing equipment sanitation and maintenance requirements dictate how the entire facility is plumbed, floors are sloped and finished, equipment is structurally supported, ceilings and walls are constructed and finished, lighting is provided, etc.
- Some agricultural commodities can be quite combustible, and storage and handling of combustible hazards dictate facility layout, fire resistive ratings of materials, building egress locations, fire extinguishing and suppression system design.
- Physical properties and quantities of raw materials, materials in-process, and processed materials dictate the structural design of the numerous silos, bins, tanks, etc. associated with the typical agri-industrial facility.
- Design of agricultural commodities storage is frequently dictated by special atmospheric storage requirements (e.g., temperature, humidity, CO₂, etc.) as all organic substances are subject to degradation by organisms both large and small.
- The myriad of materials handling equipment determine the size and location of openings, as well as how the facility is structurally framed to handle loads imposed by the handling equipment.
- Size and shape of large processing equipment dictates building shell geometry as well as how the shell of the building is framed for equipment access, removal and/or replacement.
- The tight integration of physical plant design with processing equipment/system design significantly affects working relationships between various design engineers and their companies. This integration will result in more economical and efficient facilities. This is truly a systems style agricultural engineering approach.

In the future, facilities will become even larger and more complex. These facilities will also be able to process multiple feedstock streams into the most sustainable and economical outputs. For example, a food processing plant will not only make food, but consumer and energy products based on quality, quantity, and need. This increased complexity and interaction will require engineers with a unique understanding of all

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aspects of facility design, planning and operation. This will truly require an agricultural engineering systems style approach.

This change in technologies combined with tighter schedules and larger economies of scale will require greater integration of engineering disciplines and faster and accurate project delivery methods for engineering services. Technology will play a key role in this faster delivery. One such method of integrating technology is Building Information Modeling (BIM). BIM cuts down on information double handling between different entities on the design team. Specific benefits of implementation of BIM include:

- Increased speed of delivery (time saved)
- Better coordination (fewer errors)
- Decreased costs (money saved)
- Greater productivity
- Higher-quality work.

Implementation of such technology on projects should over time generate business and higher profitability. Such technology is not widely implemented at this time by engineering firms, but it is developed enough to execute on projects with success.

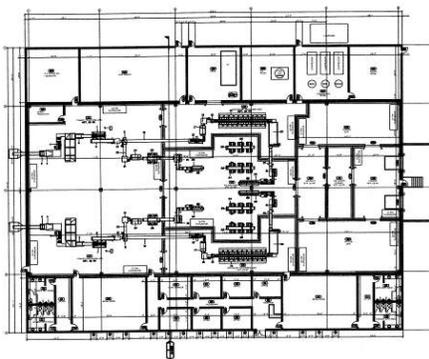
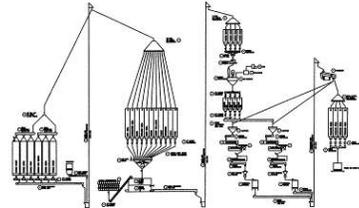
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Services

As a specialist in the design of Agri-Industrial facilities, *Facility Engineering Services* provides a number of services to our clients. These services include the basic engineering disciplines and owner support services. These services are enumerated on the following pages.

Services – Process Engineering

- P&ID
- Flow Diagrams
- Mass Balance
- Energy Balance
- Process Optimization



Services - Facility Layout and Planning

- Equipment layout
- Material Flow
- Functional Planning for Processes
- Building Code Compliance

Services - Mechanical Engineering

- HVAC
- Utilities
- Boilers
- Steam
- Water



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Services - Building and Structures Engineering

- Building Envelope Analysis
- Vessels, Bins, Tanks, and Silos
- Equipment & Tank/Bin Foundations
- Equipment Towers
- Building Structures (all Materials)
- Building Code analysis
- Fire Code analysis
- Roof Membrane Engineering
- Building Material selection
- Sanitary Construction
- Cold Storage



Services - Owner Services

- Construction Management
- Planning of expansions and new facilities
- Estimate of Probable Cost
- Integration with Business Planning

Services – Civil Engineering

- Site Layout
- Stormwater Hydrology Analysis & Design
- Utility Design
- Erosion Control Plans and Permits
- Lot Grading and Septic Plans and Permits
- Industrial Wastewater



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Industries Served

As a specialist in the design of Agri-Industrial facilities, *Facility Engineering Services* serves a number of Agricultural, Agri-Industrial, and Process based industries. These services include the basic engineering disciplines and owner support services. These services are enumerated on the following pages.

- Grain milling and Flour milling
- Malting
- Feed Milling
- Pet food processing
- Grain storage and handling
- Ethanol
- Biodiesel
- Biomass
- Cogeneration
- Rendering
- Animal housing
- Aquaculture Production and Processing
- Industrial bulk storage
- Cold Storage
- Warehouses
- Bioprocessing
- Water and Wastewater
- Industrial Processing including power and paper processing
- Food Processing
 - Bakeries
 - Vegetable processing
 - Tortilla processing
 - Kill Plants (beef, pork, and poultry)
 - Further processing (beef, pork, and poultry)
 - Fully Cooked (beef, pork, and poultry)
 - Dairy
 - Others

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Biofuels



Today's biofuels design and construction industry is complicated. Technologies are changing and the need for engineers who can work with technology providers to integrate the process with the working infrastructure are limited. *Facility Engineering Services* has people who are experienced in this changing industry.

Facility Engineering Services is process centered engineering firm that specializes in the design and planning of industrial and agri-industrial processing facilities, including biofuels using a systems based approach to deliver results. Our company has been involved in a number of agri-industries, including biomass and biofuels processing facilities. We have the capability to develop novel improvements to your facility. We are able to help you in a number of ways including but not limited to:

- Co-product utilization
- Co-generation heat and power generation
- Process efficiencies
- Building and plant modifications
- Storage and material handling design

With our business partners we are able to provide process technology and process engineering. We are focused providing results that focus on the big picture. We can help with feasibility studies, long range planning, or detail design engineering.

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Agri-Industry

Today's Agricultural processing facilities are complex entities requiring a systems approach to engineering design. As technology improves, the importance of facility and process integration will grow. Infrastructure for growth, storage, handling and processing of agricultural commodities is comprised of many complex systems including: complex equipment for loading and unloading from truck, rail, and ship;



storage structures of all types and sizes; sophisticated handling and processing equipment; and special facilities for housing/protection of this equipment. These systems must be designed, built and operated by engineers who are familiar with the unique codes, regulations and design specifications applicable to agri-industrial facilities.

For many commercial and industrial facilities, the physical plant (i.e., buildings and their mechanical systems) can be designed and built without knowledge of the manufacturing process/business that will operate within the facility. This is seldom true with an agricultural or agri-industrial facility. In virtually all cases, the building shell(s) and associated process systems are just as integral to the processing system as the processing equipment. *Facility Engineering Services* understands these requirements.

Facility Engineering Services uses a comprehensive "process-centered" design approach for our Agri-Industrial facilities. The approach involves integrating traditional engineering disciplines to focus on how the facility and/or process works as a whole. Supplementing this collective approach is an innate understanding of the industries that we serve.

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Agricultural Production and Processing



As farm sizes grow, today's Agricultural facilities are becoming more complex entities requiring engineering design. As technology improves, the importance of facility and process integration will grow. Infrastructure for growth, storage, handling and processing of agricultural commodities is comprised of many complex systems including: complex equipment for loading and unloading from truck, rail, and ship; storage structures of all types and sizes; sophisticated handling and processing equipment; and special facilities

for housing/protection of this equipment. These systems must be designed, built and operated by engineers who are familiar with the unique codes, regulations and design specifications applicable to agricultural facilities.

At *Facility Engineering Services*, we understand the need of the agricultural community. We are active members of the American Society of Agricultural and Biological Engineers (ASABE) and have been involved in the design of many types of agricultural facilities including grain bins and their foundations, fertilizer facilities, animal production facilities and other types of commercial agriculture. Construction types include post-frame buildings, metals buildings, hoop structures and other specialized agricultural structures.

The difference from other engineering firms is that *Facility Engineering Services* uses a "process-centered" design approach. The approach involves integrating traditional engineering disciplines to focus on how the facility and/or process works as a whole. This approach is invaluable when designing Agricultural production facilities.



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Biomass

Biomass/Bioprocessing is a new and emerging industry in the US. In the same light it as old as human history. Biomass processing and conversion facilities incorporate a large number of elements of today's Agricultural processing facilities. They are complex entities requiring a systems approach to engineering design. As technology improves, the importance of facility and process integration will grow. Infrastructure for growth,



storage, handling and processing of biomass is comprised of many complex systems including: complex equipment for loading and unloading from truck, rail, and ship; storage structures of all types and sizes; sophisticated handling and processing equipment for conversion or power generation; and special facilities for housing/protection of this equipment. These

systems must be designed, built and operated by engineers who are familiar with the unique codes, regulations and design specifications applicable to these types of facilities.



Bulk Storage



Bulk and liquid storage facilities are complex entities requiring in depth engineering design capabilities.

Facility Engineering Services specializes in bulk material storage systems. We have experience with many of the major design standards for bulk and liquid storage structures including ACI 313, ACI 350, API 650, API 620, ASABE 433 and many foreign standards. Having engineers who understand the unique

requirements of bulk/liquid material storage and handling facilities can help you achieve functional and economical designs.

Facility Engineering Services also specializes in material conveyance systems. Our engineers are familiar with the design conveyors, pneumatic and liquid conveyance systems. We also have extensive experience with dust control systems. Projects we have worked on include tank farms, ethanol processing facilities, grain storage, cement storage, coal handling, wood storage, general industrial bulk storage, water/waste water and many other types of facilities.

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Food Processing

Today's food processing facilities are complex entities requiring comprehensive approach to engineering design. As technology continues to improve, the importance of facility and process integration will grow. Additionally, food processing plants must be constructed to meet specific codes for sanitary operations. These systems must be designed, built and operated by engineers who are familiar with the unique codes, regulations and design specifications applicable to food processing facilities.



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Facility Engineering Services understands these needs. Our engineers are familiar with USDA, FDA and other industry requirements for the construction and operation of food processing facilities. We have working relationships with vendors from a number of food processing industries. Because *Facility Engineering Services* is a full service design specialist providing quality and cost effective consulting engineering we are able to offer comprehensive and innovative design solutions for our clients. *Facility Engineering Services's* flexibility, versatility, and adaptability in combination with a focus on client's needs helps our clients develop successful projects.

Industrial Processing

Facility Engineering Services is ready to help with your industrial processing or manufacturing facility. As industry focused engineers, we have extensive experience planning expansions and green field facilities. We have experience laying out and designing material handling systems, process lines, bulk and liquid storage systems along and their associated utilities. We work close with your in house engineering and can add depth to your in-house team. Our experience extends to structure design and facility layout and extends to a number of advanced industrial issues such as vibration control and structural dynamics. We are also able help with a number of maintenance and operational issues such as energy analysis.



As a full service engineering firm, *Facility Engineering Services* brings a total facility mind set to the development of your project. Our engineers are familiar with many aspects of industrial processing plant design and have worked in many industries such as paper mills, foundries, and general manufacturing. We feel this sets us apart from most firms.

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Water and Wastewater

Water and Wastewater facilities are complex entities requiring in depth engineering design capabilities. *Facility Engineering Services* has the capability to provide design services for these complicated facilities. Our experience includes:

Wastewater Treatment and Conveyance

- Treatment planning and design
- Process and equipment evaluations
- Biosolids and sludge management
- Anaerobic and Aerobic treatment
- Biogas utilization
- Sewer and pump station design

Drinking Water Supply, Treatment, Storage and Distribution

- Water treatment plants
- Surface water source development
- Groundwater source development
- Storage tanks
- Water distribution systems
- Pumping systems

Facility Engineering Services staff has extensive experience in various biological process design modeling of various systems. Our engineers are familiar with the design of conveyance systems and plant projects. We also have extensive experience with dust control systems. Projects we have worked on include both public and private sector work.

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Professional Licensure

Staff at Facility Engineering are registered in over half of the states as civil, structural, agricultural, and mechanical engineers. We also maintain NCEES records for fast reciprocity with other jurisdictions. Please contact the office directly to make sure our license is current.

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Key Staff

Gregory D. Williams, Ph.D., P.E., S.E.

PROFESSIONAL SUMMARY

Dr. Williams President and Founder of *Facility Engineering Services*. He has extensive experience in the structural, functional, and life safety design of agri-industrial (food, agricultural and bioprocess) process facilities including USDA and FDA inspected facilities. He has extensive experience in the design and analysis of concrete and steel bulk storage and their associated material handling systems. He is an accomplished engineer, integrating structural engineering, architectural engineering and agricultural process engineering. As part of his practice, Dr. Williams has integrated his knowledge of food & agricultural process engineering with facility layout and design. He has an advanced level technical competency in the design procedures for all major materials of construction and has developed novel and complex solutions for facility construction using these materials. He has extensive experience using the design-build project delivery method. Dr. Williams has taught construction methods and building codes at the University of Wisconsin.

EDUCATION

- Ph.D. Agricultural Engineering (Structures and Indoor Environment emphasis). University of Wisconsin-Madison.
- M.S. Agricultural Engineering (Structures and Indoor Environment emphasis). University of Wisconsin-Madison.
- B.S. Construction (Construction Engineering Option), University of Wisconsin-Madison

PROFESSIONAL EXPERIENCE

Dr. Williams has professional supervised design on nearly a billion dollars of construction in his career with a primary professional focus in the following types of facilities:

- Grain milling and Flour milling
- Malting
- Feed Milling
- Pet food processing
- Grain storage and handling
- Ethanol & Biodiesel
- Rendering
- Aquaculture Production/Processing
- Industrial & Agricultural bulk storage
- Cold Storage
- Warehouses
- Bioprocessing
- Food Processing
 - Bakeries
 - Vegetable processing

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- Tortilla processing
- Kill Plants (all proteins)
- Further processing
- Fully Cooked
- Industrial Processing including power and paper processing
- Water and Wastewater

AREAS OF SPECIALIZATION

Dr. Williams' professional focus has been in the following areas:

- **Facility Layout and Planning**
 - Equipment and Facility Layout
 - Material Flow
 - Functional Planning for Processes
- **Building and Structural Engineering**
 - Building Envelope Analysis
 - Specialty structures including Vessels, Bins, Tanks, and Silos
 - Equipment & Tank Foundations
 - Equipment Towers
 - Building Structures
 - Building Code Analysis
 - Fire Code Analysis
 - Building Material Selection
 - Numerical Methods (linear and nonlinear FEA)

MEMBERSHIPS AND AFFILIATIONS

Dr. Williams is a leader in the development of design standards for Ag and Food processing facilities. Professional and committee membership has consisted of the following:

- Member American Society of Agricultural Engineers (ASAE)
 - Past Member Board of Trustees
 - Chair SE 20 Structures Group
 - Chair SE07/1
- Member American Concrete Institute (ACI)
 - Associate Member 313 Standard Practice for the Design and Construction of Concrete Silos and Stacking Tubes
- Grain Elevator and Processing Society (GEAPS)
- American Feed Industry Association (AFIA)
- Midwest Food Processors Association (MWFPA)
- Member of Alpha Epsilon Honor Society
- Member U-W Madison Biological Systems Engineering Faculty Advisory Board

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- Member South Dakota State University Biological and Agricultural Engineering Faculty Advisory Board

PROFESSIONAL REGISTRATIONS

Registered Professional or Structural Engineer in AL, AR, IL, WI, OR, WA, IA, MT, NC, MN, OK, ND, ID, KS, MI, MS, TN, IN, KY, SC, CO, NE, SD, TX, VA, UT, MD, PA, MO.

PUBLICATIONS

Dr. Williams has written over forty publications and articles related to agriculture, food and bioprocessing facility design and construction.

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Craig Reisbeck, P.E.

PROFESSIONAL SUMMARY

Craig is a Professional Engineer, currently licensed in 6 states, and has over 30 years of experience of mechanical and process engineering in the food processing industry including both FDA and USDA inspected facilities. He is knowledgeable in all aspects of food manufacturing from delivery and handling of raw materials through packaging of finished product. His experience includes pet food manufacturing, both dry pet food as well as meat based pet treat processing; feedmill process layout; ice cream treat and confectionery processing; processed meat manufacturing including experience in hot dog, semi-dry sausage, ham processing and pork bacon processing. Craig's experience also extends to the poultry industry, primarily in first and second processing, where he has used his process engineering knowledge to design and manage projects such as plant expansions and installation of new process equipment. He has been the lead project engineer on construction of two dry pet food facilities as well as the conversion of a canned pet food plant to a pet treat facility. Craig has also been responsible for management of construction projects including facility modifications and expansions.

EDUCATION

- **Oklahoma State University**
Bachelor of Science, 1983, Agricultural Engineering
- **Oklahoma State University**
Master of Science, 1985, Agricultural Engineering

PROFESSIONAL EXPERIENCE

Mr. Reisbeck has supervised the design and construction of many types of projects over his career including projects in the following areas:

- Pet food processing
- Grain storage and handling
- Warehouse
- Wastewater
- Confectionery
- Ice Cream Treats
- Food Processing
 - Kill Plants (Poultry), 1st & 2nd Processing
 - Further processing (Meat)

AREAS OF SPECIALIZATION

Mr. Reisbeck's professional focus has been in the following areas:

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- **Process Engineering**
 - Equipment Layout
 - Material Flow
 - Functional Planning for Processes
 - Process Optimization

- **Mechanical Engineering**
 - Refrigeration
 - Utilities
 - Boilers
 - Steam
 - Water
 - Process Piping

PROFESSIONAL REGISTRATIONS

Registered Professional Engineer in Arkansas, Oklahoma, Texas, Virginia, Mississippi and Pennsylvania

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Michael F. Brugger, P.E., Ph.D.

PROFESSIONAL SUMMARY

Dr. Brugger brings over 35 years of educational, planning and design experience of a wide variety of facilities. As a State Extension Specialist in the structures and environment area, he has been involved in the planning and designs of many livestock facilities and manure handling systems, fruit and vegetable storages, grain storages and greenhouses. He has also taught a senior structural design and facility-planning course for 10 years. For 13 years, he was Assistant to the Director – Facilities Administration for the Ohio Agricultural Research and Development Center and was responsible for over 1.7 million square feet of buildings. He oversaw the long-range strategic plan development, scope of work development, design team selection, design review, construction inspection and startup trouble shooting for a variety of projects. Dr. Brugger has consulted on and has been an expert witness on many cases related to structural issues, construction contracts, and air and water quality issues. He has done complete design for many types of buildings. He has also been involved in the development and revision of design handbooks and standards.

EDUCATION

- Ph.D. Agricultural Engineering (Structures and Indoor Environment emphasis). Minor in Mechanical Engineering, University of Wisconsin-Madison.
- M.S. Agricultural Engineering (Structures and Indoor Environment emphasis). The Pennsylvania State University.
- B.S. Agricultural Engineering (Structures and Indoor Environment emphasis). The Pennsylvania State University.

PROFESSIONAL EXPERIENCE

Dr. Brugger has provided planning assistance on hundreds of buildings; oversaw the planning, design and construction of over 50 million dollars of construction; and did complete design of many buildings. His primary professional focus is in the following types of buildings:

- Dairy, poultry, swine, equine and sheep research and production facilities
 - Facility design
 - Indoor environment
 - Manure handling
 - Feed systems
 - Mechanical Systems
 - Electrical System
- Greenhouses
- Aquaculture facilities
- Fruit and vegetable storages
- Educational facilities
- Utility upgrades
- Manure handling and storage systems
- Permitting of CAFO's
- Expert witness in

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- Design issues
- Air quality
- Structural issues
- Water quality issues
- International experience in design and management of
 - Dairy facilities
 - Greenhouses
 - Vegetable storages

AREAS OF SPECIALIZATION

Dr. Brugger's professional focus has been in the following areas:

- **Facility Layout and Planning**
 - Occupant Requirements
 - Equipment Layout
 - Material Flow
 - Functional Planning for Processes
- **Building Engineering**
 - Building Envelope Analysis
 - Building Structures
 - Building Code Analysis
 - Fire Code Analysis
 - Building Material Selection
- **Mechanical Engineering**
 - Environmental and Mechanical System Design
 - Waste handling systems
- **Civil Engineering**
 - Site Development
 - Utilities
- **Permitting**

MEMBERSHIPS AND AFFILIATIONS

Dr. Brugger is a leader in the development of design standards for agricultural facilities and in professional organizations. Professional and committee membership have included the following:

- Member American Society of Agricultural and Biological Engineers (ASABE) and active in the following committees, including holding past offices:
 - Structures and Environment Division Executive Committee
 - Structures and Environment Division Steering Committee
 - Structures and Environment Division Standards Council
 - Structures and Environment Division Associate Editor
 - Structures Group

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- Dairy Housing Committee
- Greenhouse Committee
- Member American Concrete Institute (ACI)
- Northeast Dairy Practices Council
 - Past Chair Buildings and Equipment Task Force
 - Co-authored several guidelines
 - Past Board of Directors
- Member of American Society of Heating, Refrigeration and Air Conditioning Engineers, 1979 - present.
 - Member of TC 2.2 Plant and Animal Environment Committee.
- Member of Alpha Epsilon Honor Society
- Member and International Treasurer of Gamma Sigma Delta
- Member of Tau Beta Phi

PROFESSIONAL REGISTRATIONS

Registered Professional Engineer in WI, OH, IN, PA and WV.

PUBLICATIONS

Dr. Brugger has written over 50 book chapters, publications and articles related to agriculture.

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Our Partners

Power Systems Engineers

Power System Engineering, Inc. (PSE) provides electrical design services for several different types of facilities including commercial, industrial, agricultural, educational and institutional. Design services include providing construction documents for use in bid build or design build projects. PSE works alongside *Facility Engineering Services* to ensure that the design, integration and implementation of your electrical system meet applicable regulatory codes and current industry standards.

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Client List



LAND O' LAKES, INC.



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Representative Project Experience

Facility Engineering Services's Professional Employees have participated on the following projects over their careers. Personnel at Our Business Partners (IntegroEnergy and Power Engineers) have also participated in many of these projects. The following list of projects represents the experience of the Team.

Food Industry Projects

- Potato Plant Plover WI
- Hog Processing Plant Columbus Junction, IA
- Beef Processing Plant Joslin, IL
- Tortilla Plant Fayetteville, AR
- Poultry Processing Plant Berryville, AR
- Poultry Processing Plant Green Forest, AR
- Poultry Processing Plant Albertville, AL
- Aquaculture Grow out and Processing Facility Study Pierre, SD
- Aquaculture Grow out and Processing Facility Study, VA
- Rendering Plant Projects, Harmony NC
- Rendering Plant Projects, Forest MS
- Rendering Plant Projects, Scranton AR
- Rendering Plant Remodel, WV
- Rendering Plant Remodel, SC
- Greenfield Hog Processing Plant, Austin MN
- Hog Processing Plant Expansion, Fremont, MN
- Edible and Inedible Hog Kill Plant Process Improvement, Austin, MN
- Case ready hog plant process improvement project
- Offal Remodal, TX
- Live Hold Structure, VA

Agri Industry

- Slip form Grain Elevators (dozens across Midwest)
- Jump form Grain Silos (20)
- Malt Plant Review, WI
- Malt plant addition, SD
- New Malt plant, MT
- Feed Mills, (over 20)
- Pet Food Plant, OH & NE
- Poured Lick Block line, KY
- Pressed Lick Block line, KY

Bulk Storage and Material Handling

- Coal Silo, IL

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- Coal Silos, TN
- Fly Ash Silos, FL
- Bulk Cement Storage Silos, FL
- Bulk Flour Storage repairs, KS
- Grain Silos
- Coal Dump pit and Radial Stacker

Agriculture

- Flat Storage
- Poultry Barns
- Animal Housing
- Aquaculture Production Buildings
- Grain Bin Component Design & Foundations

Biofuels Projects

- Ethanol Plant Nevada, IA
- Ethanol Plant Atwater, MN
- Ethanol Plant Goldfield, IA
- Ethanol Plant Atwater, MN
- Ethanol Plant Granite Falls, MN
- Ethanol Plant Fort Dodge, IA
- Ethanol Plant Denison, IA
- Ethanol Plant Hopkinsville, KY
- Ethanol Plant Plainview, NE
- Ethanol Plant Marcus, IA
- Ethanol Plant Friesland, WI
- Ethanol Plant Iowa Falls, IA
- Ethanol Plant Malta Bend, MO
- Ethanol Plant Mason City, IA
- Ethanol Plant Minden, NE
- Ethanol Plant Central City, NE
- Ethanol Plant Palestine, IL
- Ethanol Plant West Burlington, IA
- Ethanol Plant Watertown, SD
- Ethanol Plant Monroe, WI
- Ethanol Plant Lakota, IA
- Ethanol Plant Clatskanie, OR
- Ethanol Plant Little Falls, MN
- Ethanol Plant Glenville, MN