

## MARKETS

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Education

Government

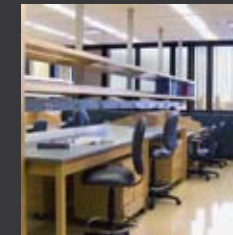
Healthcare

Industrial

Transportation

Utilities

## ENGINEERING



Boston Cedar Rapids Chicago Fargo Dallas Houston Minneapolis-St. Paul  
Rochester Washington D.C. West Palm Beach

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Designing integrated facilities that reduce capital, energy, maintenance, and operations costs.

## PROFILE

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**Engineering is an integral part of Sebesta Blomberg in the sense that it is integrated into each market we serve, service we provide, and project we deliver.** We provide a single source of technical expertise for our clients' facilities, from individual buildings to complex campuses. Whether it is the engineering of centralized and distributed utility systems, HVAC, mechanical, electrical, structural, building control systems or engineering design; clients benefit from our depth of capabilities to optimize performance. Our firm's ability to enhance and maintain buildings, develop assessment and upgrade plans, propose energy cost reduction strategies, train operations and maintenance staff, and manage site construction brings an integrated solution to your facility project.

Our design approach to facility engineering revolves around developing a thorough understanding of the people and process requirements during the initial planning phase. Working with clients to identify and resolve critical issues early in the process is critical to success. This approach reduces capital, energy, maintenance, and operations costs for years to come.

# An Integrated Approach

Custom solutions that fit your needs

## EXPERTISE

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INFRASTRUCTURE

CHILLED WATER PLANTS

BOILER PLANTS

SUBSTATIONS

UTILITIES

PROCESS ENGINEERING

MECHANICAL AND ELECTRICAL BUILDING SYSTEMS

LOW, MEDIUM, HIGH-VOLTAGE DISTRIBUTION SYSTEMS

LIGHTING

SITE SELECTION

BUILDING STRUCTURES

EQUIPMENT INSTALLATION

EXISTING FACILITY ASSESSMENTS

MATERIAL HANDLING SYSTEMS

PLANT MAINTENANCE MANAGEMENT





#### TERMINAL C SUSTAINABILITY PROGRAM Boston Logan International Airport

In an interest to determine and quantify the level of utility reduction opportunities, Sebesta Blomberg provided engineering services in support of a sustainability program for the 630,000-square-foot Terminal. The services included an initial assessment of the facility to determine and quantify the level of utility reduction opportunities. The work also included the evaluation of public and tenant submeter data and establishment of baseline energy allocations. Recommendations were developed for the terminal, including an update for select lighting, upgrade and retrocommissioning of HVAC systems, building management controls, and the addition of heat rejection systems from baggage scanners. It is estimated that energy use at the terminal can be reduced by 15% within two years.



#### MCGIVNEY HALL RENOVATION The Catholic University of America

Vacant for more than a decade, McGivney Hall is a 35,000-square-foot, five-story building that required extensive renovations to make it habitable. Work on the building included the demolition of interior walls, along with the electrical, heating, cooling, plumbing, lighting, and mechanical systems. Serving as the mechanical, plumbing, and electrical design consultant, Sebesta Blomberg was able to resolve challenging mechanical engineering problems, while maintaining the architectural integrity of the building. The team addressed the difficult issue of upgrading the building systems to a modern variable air volume system, which supplies proper levels of ventilation. The mechanical and electrical systems were designed to allow for maximum flexibility in programming the building, allowing for future interior modifications.



**NATIONWIDE ENGINEERING SERVICES  
3M**

Sebesta Blomberg has served as a multi-disciplined engineering provider, conducting engineering and mechanical, electrical and plumbing design services. Since 1994, Sebesta Blomberg has partnered with 3M on over 100 projects, including the Innovation Center, Aberdeen Plant Expansion, Maplewood Utility Plant, and Data Center.

Unique aspects of these projects include site utility modifications to accommodate expansions, installation of new utilities, electrical distribution, process piping, hazardous storage, unique structural elements, clean rooms, chilled water systems, energy audits, utility assessments, HVAC, commissioning, and mechanical and electrical engineering.



**CASS LAKE SUBSTATION  
Otter Tail Power Company**

With electric needs growing 2.1% annually, Otter Tail Power Company was looking for ways to meet current demands. Otter Tail planned for the addition of two new 115 kV - 20 MVAR capacitor banks at the existing Cass Lake substation. Sebesta Blomberg assisted with the evaluation and sizing of equipment used in the design. The grounding design was critical due to extremely high soil resistivity and required additional efforts to meet requirements.



**WARROAD BORDER STATION  
General Services Administration**

The new \$31 million Canada-United States border station will consist of a multilane, drive-thru canopy with security stations, commercial vehicle inspection building, and private-owner vehicle inspection building. Sebesta Blomberg is providing mechanical and electrical engineering services from the pre-design through construction inspection phases of the Station. Services will also assist the station in obtaining the LEED® Silver certification it is seeking.



#### MOOS TOWER SURGICAL RESEARCH AND CANCER LABORATORIES RENOVATION University of Minnesota

Designed for a 50-year life expectancy, the renovation of the Moos Tower Surgical Research and Cancer Laboratories at the University of Minnesota, in Minneapolis involved the 11th floor being demolished and transformed through design. A critical element of the project involved moving circulation from the windowed perimeter to the interior, bringing light deep into the lab and work spaces. The new space, including BSL-2 level labs, features an efficient design that expands research space by nearly 30 percent, for a total of 12,730 useable square feet. The University teamed with Sebesta Blomberg to perform engineering design services for the renovations. The successful renovation provided their internationally-renowned faculty secure, state-of-the-art facilities.



#### STABLE BUILDING DESIGN Mayo Foundation

The Stable Building is a 10-level, 200,000-square-foot high-rise designed to contain an initial 10 floors, including a mechanical penthouse, with the potential to add three additional floors in the future. Designs for facility included room for general office and anticipated future laboratory spaces. Three of the laboratory floors were set aside as shell space, while the fourth was designed and constructed as an anatomy floor.

The original building design included system services required for the future laboratory floors, including compressed air, lab gases, and fume hood exhaust. Sebesta Blomberg was involved in the complete building mechanical and electrical design throughout the project. Designs for the mechanical and electrical services that connected the new building to the existing campus energy distribution system were also provided.