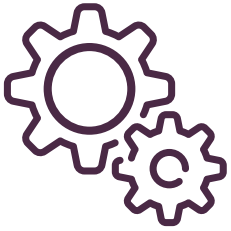




MANUFACTURING

WE DELIVER MANUFACTURERS A COMPETITIVE ADVANTAGE THROUGH A BETTER PROCESS



40 COUNTRIES

Projects executed in 40 countries—our resume includes some of the most recognized names and largest manufacturing facilities in the world

Historically the manufacturing industry has led the way in creating productivity gains—yet productivity in the design and construction industry remained flat for decades. SSOE is changing that. We combine lean methodologies with the latest technology to help our clients gain a competitive advantage in the manufacturing and high tech markets.

When you work with SSOE, you can expect an experience that is more collaborative and more transparent. We believe the easier we make it for you to provide input, the better the result will be. We gain a better understanding of our client's needs by forging close working relationships with them, and have found the longer the relationship, the more value we add. We understand you aren't in business to build buildings or execute capital projects, so we focus on your business objectives—getting your product out the door faster, better, and cheaper than your competitors. We've done this for some of the largest manufacturing projects in the world, and have become experts in applying what we've learned to projects of all sizes.

TOP 10 DESIGN FIRM

Top 10 Manufacturing Design Firm for the past 6 years (ENR)



\$850M COST SAVINGS

More than \$850 million in documented savings to manufacturing clients since 2009



TOP 25 DESIGN FIRM

Top 25 International Manufacturing Design Firm for the past 2 years (ENR)





CLIENTS

HIGH TECH

Confidential
Semiconductor
Manufacturers

Confidential Lithium-Ion
Battery Manufacturer

First Solar

TIRE

Continental Tire

Goodyear Tire &
Rubber Company

Sentury Tire

METALS

Benteler

Chase Brass and
Copper Company

TPCO

U.S. Steel

GENERAL MANUFACTURING

General Electric (GE)

GrafTech International

Holcim (US) Inc.

International Textile
Group (ITG)

Martin Marietta

National Electric
Carbon

Northshore Mine

Ovonix Battery Division

Sauder Manufacturing

United Taconite

Vanderlande Industries

Weyerhaeuser

Xerox



PROJECT TYPES

- Basebuild facility / retrofit design
- Structural analysis / upgrades
- Central / process utility buildings
- Chemical delivery systems
- Clean links, trestles, and automated material handling systems (AMHS)
- Cleanroom design / modifications
- Cooling / heating / ultra-pure water systems
- High purity gas systems
- HVAC systems
- Power distribution systems
- Seismic retrofitting
- Solvent and aqueous waste collection / treatment systems
- Sort, assembly, and test projects
- Structural analysis / upgrades
- Subfab design
- Tool installation / design / demolition / construction
- Wafer manufacturing



TECHNICAL SPECIALTIES

- Architecture
- Automation and process control system design
- Bulk material handling
- Code review, compliance, and permitting
- Commissioning and start-up
- Electrical power
- Energy efficiency analysis
- Environmental engineering
- Facility design
- "H" occupancy evaluations
- Industrial engineering analysis
- Industrial ventilation / dust collection
- Instrumentation and controls
- Interaction with Authority Having Jurisdiction (AHJ)
- Machine design
- Manufacturing Productivity Enhancement (MPE)
- Material handling systems design
- Power systems analysis including arc flash hazard
- Process automation, PLC, and HMI programming
- Process development and design
- Program management
- Programming / pre-positioning
- Project management
- Site selection
- Structural engineering
- Systems integration / control system upgrades
- Telecommunications
- Thermal process design
- Wastewater treatment