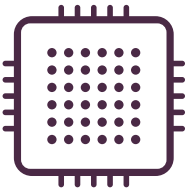




# SEMICONDUCTOR

PROVIDING CLIENTS SUCCESS THROUGH LEAN PRINCIPLES,  
COLLABORATIVE DESIGN, AND INNOVATIVE PROJECT DELIVERY



## INNOVATIVE APPROACHES

We streamline the facility design process using innovative approaches such as Lean principles like **Target Value Design**, **Kanban**, and **BIM2Fab™** model development, which prepares fabrication drawings from design models. All enhance production efficiency and optimize project schedules.

Our design professionals and project delivery teams have a long history of developing engineered solutions and implementing innovative technology for complex environments. We understand the market pressures driving new technology solutions with ever-decreasing time-to-market turnaround.

Through collaboration, innovation, technology, and flexibility, we provide you with the most complete and cost-effective project solution—tailored to meet your business objectives, basis of design, schedule milestones, and project budgets.

SSOE's team of experts—who specialize in delivering high-quality cleanroom facilities, processes and operations, process systems, process equipment layouts, process equipment installation design, and more—work together to facilitate a seamless process that is reliably executed and fully supported from the start of design through commissioning and turnover.

### TOP 5 SEMICONDUCTOR DESIGN FIRM

Top Semiconductor Design Firm for the past 6 years (*ENR*)

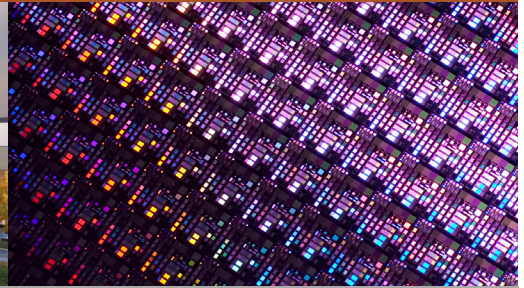
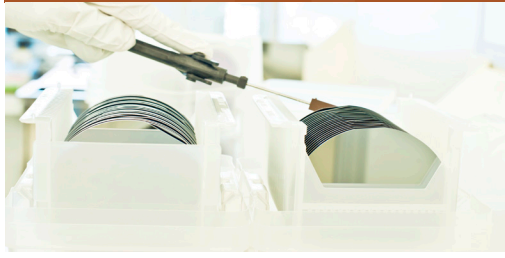


### 30+ YEARS OF EXPERIENCE

Team members with 30+ years of in-depth experience in the semiconductor and related industries ranging from small facility upgrades to full fab retrofits

### THOUSANDS OF TOOLS DEVELOPED

Process equipment installation design packages for thousands of tools for every functional area of a semiconductor facility



**“SSOE brings enthusiasm and strong project management skills to the table. They are approachable, no ego, and always provide cutting edge solutions to our challenges.”**

Design Manager, Confidential Semiconductor Manufacturer



## PROJECT TYPES

- Central / process utility buildings
- Chemical delivery systems
- Clean links and trestles, including automated material handling systems (AMHS)
- Cleanroom design / modifications
- Facility / retrofit design
- High purity gas systems
- HVAC systems, including both wet and dry side systems
- Power distribution systems
- Process and Ultrapure water systems
- Process utility distribution system design, including subfab racks and laterals
- Process equipment installation: design / demolition / conversion
- Seismic retrofit analysis / design
- Solvent and aqueous waste collection / treatment systems
- Structural analysis / upgrades



## TECHNICAL SPECIALTIES

- Architecture
- Code review, compliance, and permitting, including interaction with Authority Having Jurisdiction (AHJ)
- Commissioning and start-up assistance
- Construction documents
- Electrical, including distribution system design
- Energy efficiency analysis
- Fabrication drawings (BIM2Fab™) using design models
- H occupancy evaluations
- HVAC
- Instrumentation and controls, including process automation, PLC, and HMI programming
- Life safety systems
- Master planning
- Mechanical, HVAC and central plant systems
- Process, including production and distribution design
- Program management
- Programming / pre-positioning phases
- Structural
- Systems integration / control system upgrades
- Telecommunications